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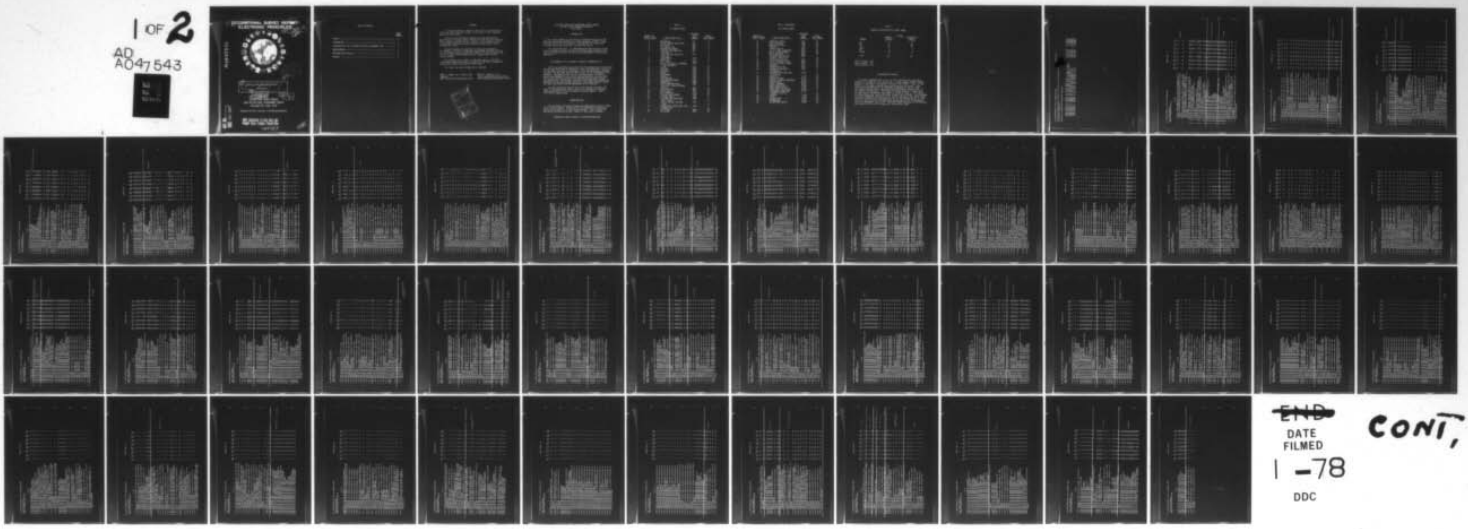

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(9) OCCUPATIONAL SURVEY REPORT.

ELECTRONIC PRINCIPLES

apr-June 77.

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(6) DIGITAL FLIGHT SIMULATOR SPECIALIST

AFSC 34154

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OCCUPATIONAL SURVEY BRANCH
USAF OCCUPATIONAL MEASUREMENT CENTER
LACKLAND AFB TEXAS 78236

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PREFACE

This report presents a summary of the results of a detailed Air Force Electronic Principles Survey of the Digital Flight Simulator Specialist, AFSC 34154.

The Electronic Principles Inventory (EPI) was developed by Major Thomas J. O'Connor and Mr. Hendrick W. Ruck and the survey data were analyzed by Captain Carole J. Kopala. All are members of the Occupational Survey Branch, USAF Occupational Measurement Center, Lackland AFB, Texas.

Computer programs for analyzing the data were designed by Dr. Raymond E. Christal, Occupational and Manpower Research Division, Air Force Human Resources Laboratory (AFHRL), and were written by the Project Analysis and Programming Branch, Computational Sciences Division, AFHRL.

Distribution of this report is made upon request to the USAF Occupational Measurement Center, attention of the Chief, Occupational Survey Branch (OMY), Lackland AFB, Texas 78236.

This report has been reviewed and is approved.

JAMES A. TURNER, JR., Colonel, USAF
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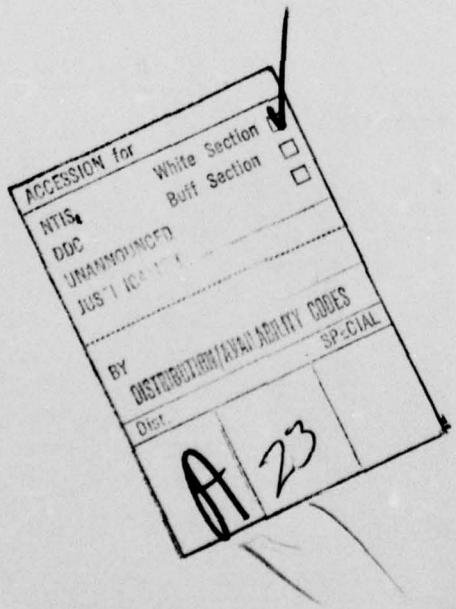

ELECTRONIC PRINCIPLES OCCUPATIONAL SURVEY REPORT
DIGITAL FLIGHT SIMULATOR SPECIALIST
AFSC 34154

INTRODUCTION

This report summarizes the results of the administration of the Electronic Principles Inventory to airmen assigned as Digital Flight Simulator Specialists (AFSC 34154). The data for this report were collected during the period April through June 1977.

This report describes: (1) development and administration of the survey instrument; and (2) electronic principles used by DAFSC 5-skill level personnel both CONUS and overseas and assigned to selected major commands.

DEVELOPMENT OF THE ELECTRONIC PRINCIPLES INVENTORY (EPI)

The EPI was developed by personnel from the Occupational Survey Branch who were well qualified in theoretical physics and electronics, as well as in task analysis and survey development. Over 300 maintenance personnel from SAC, TAC, ADC, MAC, and AFCS participated in the development of the inventory. Representing the five ATC training centers, electronics experts who averaged 12 years of maintenance experience and four years of electronic principles instruction experience spent several weeks refining the EPI. In addition, personnel at the Electrical Engineering Department of the USAF Academy and the Air Force Human Resources Laboratory were consulted during the development of the inventory.

The final version of the EPI used in this survey contained 1,257 items in 62 subject matter areas covering all electronic principles training given at the five ATC technical training centers. Table 1 lists the 62 subject areas.

ADMINISTRATION

The Electronic Principles Inventory was administered by mail to AFSC 34154 airmen worldwide. Responses from 119 individuals represented 51 percent of the total of all AFSC 34154 personnel. Table 2 shows the percentage distribution by major command of the survey incumbents.

TABLE 1

EPI SUBJECT AREAS

SEQUENCE OF SUBJECT AREAS	SUBJECT AREA TITLE	BEGINNING ITEM NUMBER	GPSUM PAGE NUMBER
1	MATHEMATICS	A1	2
2	DIRECT CURRENT AND VOLTAGE	A15	2
3	RESISTANCE	A24	2
4	MULTIMETER USES	B52	3
5	ALTERNATING CURRENT	B61	4
6	INDUCTORS AND INDUCTIVE REACTANCE	B67	4
7	CAPACITORS AND CAPACITIVE REACTANCE	C92	5
8	TRANSFORMERS	C128	6
9	MAGNETISM	C171	7
10	RCL CIRCUITS	D185	8
11	SERIES AND PARALLEL RESONANCE (TIME CONSTANTS)	D229	10
12	FILTERS	D239	10
13	COUPLING	E261	11
14	SOLDERING	E273	11
15	RELAYS	E295	12
16	MICROPHONES	F314	12
17	SPEAKERS	F327	13
18	OSCILLOSCOPES	F342	13
19	SEMICONDUCTOR DIODES	G354	13
20	TRANSISTORS	G404	15
21	TRANSISTOR AMPLIFIERS	G428	16
22	SOLID-STATE SPECIAL PURPOSE DEVICES	H477	19
23	POWER SUPPLIES	H483	19
24	OSCILLATORS	H512	19
25	MULTIVIBRATORS	I539	20
26	LIMITERS AND CLAMPERS	I555	21
27	ELECTRON TUBES	I565	21
28	ELECTRON TUBE AMPLIFIERS AND CIRCUITS	J609	22
29	SPECIAL PURPOSE ELECTRON TUBES	J616	23
30	HETERODYNING, MODULATION, AND DEMODULATION	J632	23
31	AM SYSTEMS	K638	23
32	FM SYSTEMS	K666	24

TABLE 1 (CONTINUED)

EPI SUBJECT AREAS

SEQUENCE OF SUBJECT AREAS	SUBJECT AREA TITLE	BEGINNING ITEM NUMBER	GPSUM PAGE NUMBER
33	NUMBERING SYSTEMS	K685	25
34	LOGIC FUNCTIONS	L695	25
35	BOOLEAN EQUATIONS	L708	26
36	COUNTERS	L733	27
37	TIMING CIRCUITS	M757	27
38	USE OF SIGNAL GENERATORS	M769	28
39	MOTORS AND GENERATORS	M779	28
40	METER MOVEMENTS	N808	29
41	SATURABLE REACTORS AND MAGNETIC AMPLIFIERS	N818	29
42	WAVESHAPING CIRCUITS	N834	30
43	SINGLE SIDEBAND SYSTEMS	O845	30
44	PULSE MODULATION SYSTEMS	O875	31
45	ANTENNAS	O914	32
46	TRANSMISSION LINES	P953	34
47	WAVEGUIDES AND CAVITY RESONATORS	P984	35
48	MICROWAVE AMPLIFIERS AND OSCILLATORS	P1034	37
49	REGISTERS	Q1110	39
50	STORAGE DEVICES	Q1117	40
51	DIGITAL TO ANALOG CONVERTERS	Q1126	40
52	PHANTASTRONS	Q1140	41
53	SCHMITT TRIGGERS	R1141	41
54	CABLE FABRICATION	R1144	41
55	INPUT/OUTPUT DEVICES	S1146	41
56	PHOTO SENSITIVE DEVICES	S1149	41
57	SYNCHRONOUS VIBRATIONS (CHOPPER CIRCUITS)	S1150	41
58	INFRARED	T1159	41
59	LASERS	T1186	42
60	DISPLAY TUBES	T1220	43
61	PROGRAMMING	U1234	43
62	DB AND POWER RATIOS	U1255	44

TABLE 2

COMMAND REPRESENTATION OF SURVEY SAMPLE

	34154	
COMMAND	PERCENT ASSIGNED	PERCENT OF SAMPLE
MAC	37	38
TAC	31	38
SAC	16	13
USAFE	6	2
ATC	6	2
OTHERS	4	7
TOTAL	100	100

Total Assigned - 232
Total Sampled - 119
Percent Sampled - 51%

PRESENTATON OF RESULTS

Personnel responded "yes" or "no" to the 1,257 electronic principles questions as related to their present job. A Group Summary (GPSUM) computer printout is provided in the Appendix portion of this report. Page 1 of the GPSUM lists the eight selected groups identified for this report. Pages 2-44 show the percentage of the incumbents responding to the EPI items. The computer program results display the percent members answering "yes" to the subject area questions. The reader can locate a specific subject area by referring to the Appendix page number as listed in Table 1. For example, the Transformers area results are given on page 6 of the GPSUM. The percentage of survey respondents indicating use of specific electronic principles ranged from high in areas such as Oscilloscopes (p. 13) and Storage Devices (p. 40) to low in areas such as Pulse Modulation Systems (pp. 31-32) and Waveguides and Cavity Resonators (pp. 35-37). Additional AFSC 34154 data can be obtained upon request to the Chief, Occupational Survey Branch (OMY).

APPENDIX

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS PSUM4 PAGE 1

TABULATION OF ELECTRONIC PRINCIPLES UTILIZATION DATA FOR SELECTED GROUPS
IN THE 391X9 CAREER FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY =	SPC076	ALL AIRMEN DAFSC 39159	CONTAINING	119 MEMBERS.
GROUP IDENTITY =	SPC077	ALL AIRMEN DAFSC 39159 STATIONED IN CONUS	CONTAINING	111 MEMBERS.
GROUP IDENTITY =	SPC078	ALL AIRMEN DAFSC 39159 STATIONED OVERSEAS	CONTAINING	8 MEMBERS.
GROUP IDENTITY =	SPC079	ALL AIRMEN DAFSC 39159 ASSIGNED TO ATC	CONTAINING	2 MEMBERS.
GROUP IDENTITY =	SPC080	ALL AMN DAFSC 39159 ASSIGNED TO MAC	CONTAINING	95 MEMBERS.
GROUP IDENTITY =	SPC081	ALL AMN DAFSC 39159 ASSIGNED TO SAC	CONTAINING	16 MEMBERS.
GROUP IDENTITY =	SPC082	ALL AMN DAFSC 39159 ASSIGNED TO TAC	CONTAINING	95 MEMBERS.
GROUP IDENTITY =	SPC083	ALL AMN DAFSC 39159 ASSIGNED TO USAFE	CONTAINING	2 MEMBERS.

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
A	1	A1-01 IN YOUR PRESENT JOB, DO YOU USE INSTRUMENTS, SUCH AS METERS OR OSCILLOSCOPES, IN WHICH IT IS NECESSARY TO AMPLIFY OR ATTENUATE VOLTAGE, RESISTANCE, ETC., BY POWERS OF 10.	92	92	100	100	87	94	96	100	MATHEMATICS
A	2	A1-02 DO YOU USE PUBLICATIONS, SUCH AS A TECHNICAL ORDERS OR MAINTENANCE MANUALS, IN WHICH IT IS NECESSARY FOR YOU TO MULTIPLY OR DIVIDE BY A POWER OF 10 BEFORE YOU CAN APPLY THE INFORMATION FROM THE PUBLICATION IN A USEFUL WAY ON THE JOB.	53	50	100	100	56	63	90	100	
A	3	A1-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.	57	55	88	100	53	50	58	100	
A	4	A1-04 DO YOU CALCULATE THE SQUARE ROOT OF A QUANTITY.	39	37	63	0	33	38	38	100	
A	5	A1-05 DO YOU SOLVE FOR UNKNOWN QUANTITIES.	45	43	75	100	47	50	36	100	
A	6	A1-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.	11	8	50	0	7	13	9	100	
A	7	A1-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.	14	12	50	0	7	19	16	100	
A	8	A1-08 DO YOU SOLVE QUADRATIC EQUATIONS.	22	20	50	50	13	19	24	100	
A	9	A1-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS.	9	6	50	50	7	6	4	100	
A	10	A1-10 DO YOU PERFORM CALCULATIONS ON VECTOR QUANTITIES.	37	34	75	50	24	44	90	100	
A	11	A1-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.	61	58	100	100	99	69	62	100	
A	12	A1-12 DO YOU DETERMINE AREAS OF PLANE FIGURES.	17	14	50	0	13	19	13	50	
A	13	A1-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS.	19	16	63	50	18	6	18	50	
A	14	A1-14 DO YOU SOLVE OR USE PROPORTIONS.	40	39	63	100	38	25	92	100	
A	15	A2-01 DO YOU USE THE TERM VOLTAGE OR VOLT (V).	98	98	100	100	96	100	100	100	DIRECT CURRENT AND VOLTAGE
A	16	A2-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).	52	50	88	50	53	38	53	100	
A	17	A2-03 DO YOU USE THE TERM OHM.	98	98	100	100	96	100	100	100	
A	18	A2-04 DO YOU USE THE TERM ION.	21	20	38	0	22	13	20	100	
A	19	A2-05 DO YOU USE THE TERM DYNE.	18	16	50	50	18	13	16	100	
A	20	A2-06 DO YOU USE THE TERM AMPERE.	97	97	100	100	93	100	100	100	
A	21	A2-07 DO YOU USE THE TERM NEUTRON.	24	22	50	0	22	31	16	100	
A	22	A2-08 DO YOU USE THE TERM COULOMB.	24	23	38	50	27	25	18	100	
A	23	A2-09 DO YOU USE THE TERM PROTON.	22	21	38	0	22	31	16	100	
A	24	A3-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.	87	87	88	100	89	88	87	100	RESISTANCE
A	25	A3-02 DO YOU INSPECT RESISTORS.	89	88	100	100	84	94	91	100	
A	26	A3-03 DO YOU CLEAN RESISTORS.	75	73	100	50	73	69	76	100	
A	27	A3-04 DO YOU ADJUST RESISTORS.	94	94	100	100	93	94	96	100	
A	28	A3-05 DO YOU CHECK OHMIC VALUE OR RESISTORS.	95	95	88	100	96	100	93	100	
A	29	A3-06 DO YOU REMOVE OR REPLACE RESISTORS.	97	97	100	100	96	100	98	100	
A	30	A3-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS YOU PERFORM.	34	34	38	50	31	19	42	0	
A	31	A3-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS SUCH AS FIXED RESISTOR SYMBOLS OR TAPPED RESISTOR SYMBOLS.	97	97	100	100	94	100	98	100	
A	32	A3-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, RHEOSTAT, OR POTENTIOMETER.	96	95	100	100	96	100	93	100	
A	33	A3-10 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE OHMIC VALUE OF RESISTANCE.	96	95	100	100	96	99	96	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
A	34	A3-11 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE TOLERANCE.	92	91	100	100	87	94	93	100	
A	35	A3-12 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE FAILURE RATE.	30	31	25	0	36	25	29	0	
A	36	A3-13 DO YOU MAKE DECISIONS IN WHICH YOU MUST DETERMINE HOW TWO OR MORE BATTERIES MUST BE CONNECTED TOGETHER TO ACHIEVE A SPECIFIC VOLTAGE.	29	26	63	50	27	25	22	50	
A	37	A3-14 DO YOU USE OR REFER TO THE SCHEMATIC SYMBOLS WHICH REPRESENT BATTERIES, FUSES, CONDUCTORS, LAMPS, OR SWITCHES	97	96	100	100	96	94	98	100	
A	38	A3-15 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES RESISTIVE CIRCUITS.	67	66	88	100	62	75	62	100	
A	39	A3-16 DO YOU CALCULATE TOTAL CURRENT FOR SERIES RESISTIVE CIRCUITS.	62	61	75	100	58	69	58	100	
A	40	A3-17 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES RESISTIVE CIRCUITS.	68	67	88	100	69	56	64	100	
A	41	A3-18 DO YOU CALCULATE POWER DISSIPATION FOR SERIES RESISTIVE CIRCUITS.	50	49	75	100	44	56	44	100	
A	42	A3-19 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES PARALLEL RESISTIVE CIRCUITS.	64	62	88	100	62	69	58	100	
A	43	A3-20 DO YOU CALCULATE TOTAL CURRENT FOR SERIES PARALLEL RESISTIVE CIRCUITS.	61	59	75	100	58	63	58	100	
A	44	A3-21 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	63	61	88	100	69	56	53	100	
A	45	A3-22 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	54	53	63	100	60	56	42	100	
A	46	A3-23 DO YOU CALCULATE POWER DISSIPATION FOR SERIES PARALLEL RESISTIVE CIRCUITS.	49	47	75	100	44	50	44	100	
A	47	A3-24 DO YOU CALCULATE TOTAL RESISTANCE FOR PARALLEL RESISTIVE CIRCUITS.	66	63	100	100	62	69	60	100	
A	48	A3-25 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RESISTIVE CIRCUITS.	60	58	88	100	56	63	56	100	
A	49	A3-26 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR PARALLEL RESISTIVE CIRCUITS.	64	61	100	100	67	56	56	100	
A	50	A3-27 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR PARALLEL RESISTIVE CIRCUITS.	55	53	75	100	58	56	44	100	
A	51	A3-28 DO YOU CALCULATE POWER DISSIPATION FOR PARALLEL RESISTIVE CIRCUITS.	49	46	88	100	42	50	44	100	
B	52	B1-01 DO YOU MEASURE RESISTANCE.	98	98	100	100	98	100	98	100	
B	53	B1-02 DO YOU REPAIR OHMMETERS.	8	8	0	0	7	13	9	0	
B	54	B1-03 DO YOU MEASURE VOLTAGE.	98	98	100	100	98	100	98	100	
B	55	B1-04 DO YOU REPAIR VOLTMETERS.	6	6	0	0	9	13	2	0	MULTIMETER USES
B	56	B1-05 DO YOU REPAIR AMMETERS.	6	6	0	0	9	13	2	0	
B	57	B1-06 DO YOU MEASURE CURRENT.	91	91	88	100	84	94	96	100	
B	58	B1-07 DO YOU USE MULTIMETERS.	98	98	100	100	98	100	98	100	
B	59	B1-08 DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A COULOMB.	9	8	25	50	9	6	7	50	
B	60	B1-09 DO YOU READ SCHEMATICS.	98	98	100	100	98	100	98	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
B	61	B2-01 DO YOU USE OR REFER TO THE TERM EFFECTIVE VOLTAGE (RMS).	79	79	75	100	78	88	76	100	ALTERNATING CURRENT
B	62	B2-02 DO YOU USE OR REFER TO THE TERM PEAK TO PEAK VOLTAGE.	90	91	75	100	96	94	84	100	
B	63	B2-03 DO YOU USE OR REFER TO THE TERM AVERAGE VOLTAGE (DC).	77	77	75	100	82	75	73	100	
B	64	B2-04 DO YOU USE OR REFER TO THE TERM WAVE LENGTH.	66	66	63	50	76	56	60	50	
B	65	B2-05 DO YOU USE OR REFER TO THE TERM FREQUENCY.	88	88	88	100	91	94	82	100	
B	66	B2-06 DO YOU USE OR REFER TO THE TERM INSTANTANEOUS VALUE.	38	36	63	0	36	56	31	100	
B	67	B3-01 DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKE COILS IN YOUR PRESENT JOB.	62	64	38	100	62	56	67	0	INDUCTORS AND INDUCTIVE REACTANCE
B	68	B3-02 DO YOU INSPECT INDUCTORS.	55	56	50	100	56	50	58	0	
B	69	B3-03 DO YOU CLEAN INDUCTORS.	39	41	25	50	44	25	44	0	
B	70	B3-04 DO YOU ADJUST INDUCTORS.	39	39	38	100	40	25	42	0	
B	71	B3-05 DO YOU REMOVE OR REPLACE INDUCTORS.	64	65	50	100	64	56	69	0	
B	72	B3-06 DO YOU USE OR REFER TO INDUCTANCE.	48	48	50	100	49	31	53	0	
B	73	B3-07 DO YOU USE OR REFER TO HENRIES.	42	42	38	100	42	38	44	0	
B	74	B3-08 DO YOU USE OR REFER TO INDUCTIVE REACTANCE.	39	39	50	100	40	25	42	0	
B	75	B3-09 DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.	13	14	13	50	16	13	11	0	
B	76	B3-10 DO YOU USE OR REFER TO HYSTERESIS LOSS IN INDUCTORS.	18	18	25	100	16	13	20	0	
B	77	B3-11 DO YOU USE OR REFER TO EDDY CURRENT LOSS IN INDUCTORS	18	16	38	100	13	19	16	0	
B	78	B3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTANCE IS PROPORTIONAL TO THE SQUARE OF THE NUMBER OF TURNS OF THE COIL.	13	13	25	0	18	6	11	0	
B	79	B3-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE CROSS SECTIONAL AREA OF THE CORE.	12	11	25	50	16	0	9	0	
B	80	B3-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS INVERSELY PROPORTIONAL TO ITS LENGTH.	14	14	25	50	18	6	11	0	
B	81	B3-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE PERMEABILITY OF THE CORE MATERIAL.	14	14	25	50	18	13	9	0	
B	82	B3-16 DO YOU CALCULATE INDUCTANCE FOR PARTICULAR INDUCTORS USING FORMULAS.	18	17	38	0	18	13	20	0	
B	83	B3-17 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTANCE IN SERIES.	20	20	25	0	18	13	27	0	
B	84	B3-18 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.	19	19	25	0	16	13	27	0	
B	85	B3-19 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.	19	19	25	0	16	13	27	0	
B	86	B3-20 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.	31	31	38	100	27	19	36	0	
B	87	B3-21 DO YOU CALCULATE INDUCTIVE REACTANCE.	22	20	50	50	18	13	24	0	
B	88	B3-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO FREQUENCY.	21	20	38	50	16	6	29	0	
B	89	B3-23 DO YOU WORK WITH POWER INDUCTORS.	40	42	13	100	33	31	53	0	
B	90	B3-24 DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.	93	95	13	100	97	19	53	0	
B	91	B3-25 DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.	26	27	13	100	27	13	29	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

CAPACITORS AND CAPACITIVE REACTAN

		BY-TASK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083
C	92	C1-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS IN YOUR PRESENT JOB.	92	91	100	100	89	100	89	100
C	93	C1-02 DO YOU INSPECT CAPACITORS.	91	90	100	100	84	100	91	100
C	94	C1-03 DO YOU CLEAN CAPACITORS.	54	56	25	50	56	50	60	0
C	95	C1-04 DO YOU ADJUST CAPACITORS.	61	62	50	100	60	50	69	50
C	96	C1-05 DO YOU TEST CAPACITORS.	87	86	100	100	89	88	80	100
C	97	C1-06 DO YOU DISCHARGE CAPACITORS.	76	76	88	100	69	69	84	100
C	98	C1-07 DO YOU REMOVE OR REPLACE CAPACITORS.	94	94	100	100	96	100	89	100
C	99	C1-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.	24	24	13	0	27	19	22	50
C	100	C1-09 DO YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN A DIELECTRIC.	6	6	0	0	11	6	2	0
C	101	C1-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.	93	93	100	100	91	100	91	100
C	102	C1-11 DO YOU USE OR REFER TO CAPACITANCE.	87	87	88	100	84	94	87	100
C	103	C1-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT	18	17	25	0	13	19	22	50
C	104	C1-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS	75	73	100	100	64	81	76	100
C	105	C1-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE	93	91	63	50	92	31	94	50
C	106	C1-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES	95	94	63	50	97	50	38	100
C	107	C1-16 DO YOU WORK WITH CAPACITORS IN DC CIRCUITS	92	92	100	50	96	100	87	100
C	108	C1-17 DO YOU WORK WITH CAPACITORS IN AC CIRCUITS	91	92	75	100	91	94	91	100
C	109	C1-18 DO YOU WORK WITH CAPACITORS IN CIRCUITS WITH BOTH DC AND AC	82	83	63	100	87	81	78	100
C	110	C1-19 DO YOU WORK WITH CAPACITORS IN DON'T REMEMBER WHICH CIRCUITS	19	20	13	0	29	13	13	0
C	111	C1-20 DO YOU CALCULATE CAPACITANCE FOR PARTICULAR CAPACITORS USING FORMULAS	24	23	50	0	24	25	20	50
C	112	C1-21 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL TO THE DIELECTRIC CONSTANT	14	14	13	50	20	19	7	0
C	113	C1-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL TO THE DIELECTRIC THICKNESS	13	13	25	50	18	13	7	50
C	114	C1-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES	36	34	63	0	40	31	31	100
C	115	C1-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL	35	33	63	0	38	31	31	100
C	116	C1-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS	33	31	63	0	36	25	29	100
C	117	C1-26 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT DOES NOT FLOW THROUGH CAPACITORS, IT ONLY APPEARS TO DO SO	40	41	38	50	51	31	36	0
C	118	C1-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LEADS VOLTAGE IN AC CAPACITOR CIRCUITS	38	36	63	100	40	31	33	100
C	119	C1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO FREQUENCY	29	23	38	50	27	25	18	0
C	120	C1-29 DO YOU CALCULATE CAPACITIVE REACTANCE	26	29	50	0	22	25	27	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
C 121	C1-30 DO YOU WORK WITH ROTOR-STATOR (VARIABLE) CAPACITORS	96	98	25	50	97	25	56	50	
C 122	C1-31 DO YOU WORK WITH COMPRESSION (TRIMMER) CAPACITORS	96	98	25	50	90	63	99	50	
C 123	C1-32 DO YOU WORK WITH ELECTROLYTIC (FIXED) CAPACITORS	88	87	100	100	89	99	82	100	
C 124	C1-33 DO YOU WORK WITH PAPER (FIXED) CAPACITORS	89	89	88	100	78	99	87	100	
C 125	C1-34 DO YOU WORK WITH MICA (FIXED) CAPACITORS	87	86	100	100	84	75	91	100	
C 126	C1-35 DO YOU WORK WITH CERAMIC (FIXED) CAPACITORS	90	89	100	100	89	88	89	100	
C 127	C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS	19	20	13	0	33	13	11	0	
C 128	C2-01 DO YOU WORK WITH TRANSFORMERS IN YOUR PRESENT JOB	85	84	100	100	80	99	84	100	
C 129	C2-02 DO YOU INSPECT TRANSFORMERS	79	73	88	100	73	88	67	100	
C 130	C2-03 DO YOU CLEAN TRANSFORMERS	97	97	50	100	97	50	97	0	
C 131	C2-04 DO YOU ADJUST TRANSFORMERS	39	40	25	100	38	50	36	50	TRANSFORMERS
C 132	C2-05 DO YOU TROUBLESHOOT TRANSFORMERS	73	72	88	100	73	63	76	100	
C 133	C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS	89	88	100	100	89	100	84	100	
C 134	C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING	9	10	0	0	20	0	4	0	
C 135	C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTION AND MUTUAL INDUCTANCE (M)	8	9	0	50	13	0	7	0	
C 136	C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M	8	7	13	50	7	6	7	50	
C 137	C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS	15	14	25	50	13	13	16	0	
C 138	C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS	22	20	50	0	24	25	16	100	
C 139	C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS	8	8	13	0	9	13	7	0	
C 140	C2-13 DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR TRANSFORMERS	8	8	13	0	13	6	4	0	
C 141	C2-14 DO YOU WORK WITH AUTOTRANSFORMERS	39	38	63	100	36	19	94	100	
C 142	C2-15 DO YOU WORK WITH POWER TRANSFORMERS	81	80	88	100	78	94	78	100	
C 143	C2-16 DO YOU WORK WITH AUDIO TRANSFORMERS	67	67	75	100	69	69	62	100	
C 144	C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS	31	31	38	100	33	19	29	0	
C 145	C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMERS	23	23	13	0	33	19	18	0	
C 146	C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE	79	78	88	100	82	88	71	100	
C 147	C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE	72	71	88	50	78	69	69	100	
C 148	C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES	62	60	88	50	56	75	60	100	
C 149	C2-22 DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-DOWN TURNS RATIO	29	31	0	0	27	38	36	0	
C 150	C2-23 DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-DOWN TURNS RATIO	96	99	75	50	90	63	92	100	
C 151	C2-24 DO YOU REFER TO BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS	83	83	88	100	80	99	82	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 077	SPC 080	SPC 081	SPC 082	SPC 083	
C 152	C2-25 DO YOU REFER TO MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS	70	71	50	100	67	81	73	100	
C 153	C2-26 DO YOU REFER TO MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	72	72	75	100	71	88	69	100	
C 154	C2-27 DO YOU REFER TO CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	76	76	88	100	78	94	69	100	
C 155	C2-28 DO YOU REFER TO AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	46	45	63	100	42	50	44	50	
C 156	C2-29 DO YOU REFER TO IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	54	53	63	100	51	63	51	50	
C 157	C2-30 DO YOU REFER TO COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS	68	68	75	100	71	56	69	100	
C 158	C2-31 DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING SCHEMATIC SYMBOLS	45	43	75	100	42	69	33	50	
C 159	C2-32 DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH	24	25	13	50	24	13	31	50	
C 160	C2-33 DO YOU REFER TO OR USE THE GENERAL RULE THAT THE TURNS RATIO OF A TRANSFORMER IS EQUAL TO THE VOLTAGE RATIO	26	24	50	50	20	38	24	50	
C 161	C2-34 DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS	46	43	88	50	31	69	49	100	
C 162	C2-35 DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS	21	19	50	50	16	25	20	50	
C 163	C2-36 DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS	14	14	13	0	16	19	13	0	
C 164	C2-37 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH THREE PHASE TRANSFORMERS	43	41	63	50	47	38	40	50	
C 165	C2-38 DO YOU INSPECT THREE PHASE TRANSFORMERS	36	35	50	50	40	31	33	0	
C 166	C2-39 DO YOU CLEAN OR LUBRICATE THREE PHASE TRANSFORMERS	21	22	13	50	20	13	27	0	
C 167	C2-40 DO YOU ADJUST THREE PHASE TRANSFORMERS	23	23	13	50	24	13	27	0	
C 168	C2-41 DO YOU TROUBLESHOOT THREE PHASE TRANSFORMERS	38	36	63	50	38	31	38	50	
C 169	C2-42 DO YOU REMOVE OR REPLACE COMPLETE THREE PHASE TRANSFORMERS	43	41	63	50	42	31	47	50	
C 170	C2-43 DO YOU REMOVE OR REPLACE THREE PHASE TRANSFORMER PARTS SUCH AS WINDINGS	8	8	0	0	16	0	4	0	
C 171	C3-01 DO YOU USE OR REFER TO PERMANENT MAGNETS	39	39	38	100	40	31	38	0	
C 172	C3-02 DO YOU USE OR REFER TO TEMPORARY MAGNETS	39	39	38	50	44	25	38	0	
C 173	C3-03 DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC MATERIALS	18	18	13	50	18	19	18	0	MAGNETISM
C 174	C3-04 DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS	12	12	13	50	9	19	11	0	
C 175	C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS	18	18	13	50	18	31	13	0	
C 176	C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM	24	24	0	50	24	38	24	0	
C 177	C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR FLUX	24	24	13	50	27	25	20	0	
C 178	C3-08 DO YOU USE OR REFER TO WEBER'S THEORY OF MAGNETISM	6	5	13	0	9	0	4	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

			SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
		D1-15A									
C	179	C3-09 DO YOU USE OR REFER TO DOMAIN THEORY OF MAGNETISM	5	5	0	0	9	0	4	0	
C	180	C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION	23	23	25	50	33	13	16	0	
C	181	C3-11 DO YOU USE OR REFER TO FLUX DENSITY	12	13	0	50	16	6	11	0	
C	182	C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES ATTRACT	45	44	63	100	47	38	42	50	
C	183	C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES	21	21	25	0	20	25	22	0	
C	184	C3-14 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL	19	19	25	0	16	25	22	0	
D	185	D1-01 DO YOU WORK WITH RC, LR, RCL CIRCUITS IN YOUR PRESENT JOB	55	55	63	100	40	44	69	100	
D	186	D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS	22	20	50	50	20	19	18	100	
D	187	D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS	16	14	50	50	16	13	11	100	RCL CIRCUITS
D	188	D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS	34	32	63	100	27	38	33	100	
D	189	D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS	34	32	63	100	27	38	33	100	
D	190	D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH RCL CIRCUITS	29	27	50	100	20	31	29	50	
D	191	D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS	34	32	50	50	31	25	36	100	
D	192	D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS	22	20	50	50	18	19	20	100	
D	193	D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS	19	17	50	50	20	13	16	100	
D	194	D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS	23	21	50	50	22	13	20	100	
D	195	D1-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS	17	14	50	50	13	13	16	100	
D	196	D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS	18	15	50	50	16	13	16	50	
D	197	D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS	35	33	63	100	33	31	31	100	
D	198	D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS	30	30	38	100	24	25	31	0	
D	199	D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS	25	24	38	100	20	25	22	0	
D	200	D1-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS	34	32	63	100	27	25	33	100	
D	201	D1-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS	9	7	38	50	9	6	4	0	
D	202	D1-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS	18	17	25	50	13	13	18	0	
D	203	D1-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS	19	12	50	50	11	13	9	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083
D	204	D1-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS	32	32	38	100	29	13	36	0
D	205	D1-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS	22	22	25	50	24	13	20	0
D	206	D1-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS	17	15	38	50	16	13	13	50
D	207	D1-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS	18	15	50	50	13	19	16	100
D	208	D1-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS	14	13	38	50	13	6	13	50
D	209	D1-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS	18	16	50	50	13	19	18	100
D	210	D1-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS	8	8	13	50	9	0	9	0
D	211	D1-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS	13	14	13	50	11	13	16	0
D	212	D1-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS	15	14	38	50	11	13	16	50
D	213	D1-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS	13	13	25	50	9	13	16	50
D	214	D1-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS	16	14	38	50	11	19	16	100
D	215	D1-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS	9	8	25	50	9	6	7	50
D	216	D1-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD	12	11	25	50	11	6	11	50
D	217	D1-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW	17	15	38	50	13	19	16	50
D	218	D1-34 DO YOU CHECK CAPACITORS USING OHMMETERS	60	59	63	100	51	56	64	100
D	219	D1-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION	45	45	50	50	38	38	51	50
D	220	D1-36 DO YOU CHECK INDUCTORS USING OHMMETERS	49	50	38	100	44	38	58	0
D	221	D1-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION	39	39	38	0	36	38	44	0
D	222	D1-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT THETA= 0, PF = 1, AND PA = PT FOR RESONANT CIRCUITS	8	7	13	50	11	0	4	0
D	223	D1-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS	18	15	50	50	16	19	13	100
D	224	D1-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE RESONANT FREQUENCY FOR SERIES RCL CIRCUITS	15	14	38	0	16	19	11	0
D	225	D1-41 DO YOU USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT RESONANT FREQUENCY FOR PARALLEL RCL CIRCUITS	17	14	50	0	16	19	13	50
D	226	D1-42 DO YOU USE OR REFER TO THE GENERAL RULE THAT HALF POWER POINTS ARE AT 70.7 PERCENT OF THE PEAK CURRENT VALUE	18	17	38	50	18	13	18	0
D	227	D1-43 DO YOU USE OR REFER TO THE GENERAL RULE THAT BANDWIDTH IS INVERSELY PROPORTIONAL TO Q	13	14	13	50	13	13	13	0
D	228	D1-44 DO YOU DETERMINE HOW CHANGES IN FREQUENCY, RESISTANCE, CAPACITANCE, OR INDUCTANCE WILL AFFECT CURRENT OR PHASE ANGLES FOR RCL CIRCUITS	18	17	38	50	16	31	13	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DY-TEX	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
D	229	D2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR REFER TO SERIES OR PARALLEL RESONANT CIRCUITS OR TIME CONSTANTS	29	28	50	50	22	31	33	50	
D	230	D2-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS	26	29	50	50	29	25	20	50	
D	231	D2-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE	18	19	13	0	16	25	22	0	
D	232	D3-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS	13	11	38	50	7	13	11	50	SERIES AND PARALLEL RESONANCE (TIME CONSTANTS)
D	233	D2-05 DO YOU USE OR REFER TO THE GENERAL RULE THAT A CAPACITOR IS FULLY CHARGED (OR DISCHARGED) AFTER FIVE (5) TIME CONSTANTS (TC)	18	18	25	50	20	25	13	0	
D	234	D2-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS	9	10	0	50	11	13	7	0	
D	235	D2-07 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CIRCUIT CURRENT OR COMPONENT VOLTAGES AFTER A SPECIFIC TIME FOR RC OR LR CIRCUITS	13	12	38	50	11	19	9	0	
D	236	D2-08 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT VOLTAGES TO REACH SPECIFIC VALUES FOR RC OR LR CIRCUITS	13	12	25	50	11	19	9	0	
D	237	D2-09 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND COMPONENT VOLTAGES TO REACH SPECIFIC VALUES IN SPECIFIC TIMES	13	12	25	50	11	19	9	0	
D	238	D2-10 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT IN LR CIRCUITS REACHES ITS MINIMUM VALUE (OR ZERO) AFTER FIVE (5) TIME CONSTANTS	11	11	13	0	11	19	9	0	
D	239	D3-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS IN YOUR PRESENT JOB	64	65	50	100	44	81	76	50	
D	240	D3-02 DO YOU INSPECT FILTER CIRCUITS	56	57	50	100	36	75	69	50	
D	241	D3-03 DO YOU CLEAN FILTER CIRCUITS	40	42	13	0	36	31	53	0	
D	242	D3-04 DO YOU ALIGN OR ADJUST FILTER CIRCUITS	47	48	38	100	36	44	58	50	FILTERS
D	243	D3-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT LEVEL	51	51	50	100	36	75	56	50	
D	244	D3-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS	57	58	50	100	44	69	62	50	
D	245	D3-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT	57	58	50	100	40	81	64	50	
D	246	D3-08 DO YOU REMOVE OR REPLACE FILTER CIRCUIT COMPONENT PARTS	59	59	50	100	44	69	67	50	
D	247	D3-09 DO YOU WORK WITH LOW PASS FILTERS	48	48	50	50	38	44	56	50	
D	248	D3-10 DO YOU WORK WITH HIGH PASS FILTERS	46	47	38	50	38	44	53	50	
D	249	D3-11 DO YOU WORK WITH BANDPASS FILTERS	37	38	25	50	27	44	44	0	
D	250	D3-12 DO YOU WORK WITH BAND-REJECT FILTERS	33	34	13	50	27	31	42	0	
D	251	D3-13 DON'T REMEMBER WHICH TYPE OF FILTER YOU WORK WITH	22	23	0	50	18	25	29	0	
D	252	D3-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATION	28	28	25	100	27	31	27	50	
D	253	D3-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATION	29	30	25	100	29	25	29	50	
D	254	D3-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATION	29	29	38	100	27	25	31	50	
D	255	D3-17 DON'T REMEMBER WHICH TYPE FILTER CONFIGURATION	29	32	0	0	27	25	40	0	
D	256	D3-18 DO THE FILTERS YOU WORK WITH USE PARALLEL RESONANT CIRCUITS	31	30	50	50	31	25	27	50	
D	257	D3-19 DO THE FILTERS YOU WORK WITH USE SERIES-PARALLEL CIRCUITS	34	33	50	50	31	31	33	50	
D	258	D3-20 DO THE FILTERS YOU WORK WITH USE SERIES RESONANT CIRCUITS	31	30	50	50	31	25	27	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 070	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
D 259	D3-21 DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT	34	36	0	100	24	19	51	0	
D 260	D3-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC FILTERS	15	16	13	50	11	19	18	0	
E 261	E1-01 DO YOU WORK WITH COUPLING DEVICES IN YOUR PRESENT JOB	59	58	75	100	51	63	62	100	
E 262	E1-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH RC COUPLING	59	52	75	100	47	56	56	100	
E 263	E1-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH IMPEDANCE COUPLING	40	40	50	50	40	31	42	100	COUPLING
E 264	E1-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH TRANSFORMER COUPLING	54	52	75	100	49	63	51	100	
E 265	E1-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM RC COUPLING	55	53	75	100	47	63	56	100	
E 266	E1-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM IMPEDANCE COUPLING	45	44	63	50	44	31	49	100	
E 267	E1-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM TRANSFORMER COUPLING	54	52	75	100	51	63	49	100	
E 268	E1-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS	55	54	63	100	51	63	53	100	
E 269	E1-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS	52	50	75	50	49	56	51	100	
E 270	E1-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS	39	39	50	50	38	44	40	100	
E 271	E1-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS	51	50	75	100	49	56	47	100	
E 272	E1-12 DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUITS	21	23	0	50	20	19	27	0	
E 273	E2-01 IN YOUR PRESENT JOB, DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS	94	94	100	100	91	94	96	100	
E 274	E2-02 DO YOU SELECT TYPE OF SOLDER TO USE	82	82	88	100	78	88	84	50	
E 275	E2-03 DO YOU ADD FLUX TO CONNECTIONS	82	83	75	100	91	69	78	100	
E 276	E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS	92	92	88	100	96	88	89	100	SOLDERING
E 277	E2-05 DO YOU STRIP INSULATION FROM WIRES	97	97	100	100	98	100	96	100	
E 278	E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS	95	95	100	100	98	100	91	100	
E 279	E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS	97	97	100	100	98	100	96	100	
E 280	E2-08 DO YOU CUT WIRES	97	97	100	100	98	100	96	100	
E 281	E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS	73	71	100	100	78	69	64	100	
E 282	E2-10 DO YOU TIN SOLDERING IRON TIPS	97	96	100	100	98	100	93	100	
E 283	E2-11 DO YOU CLEAN SOLDERING IRON TIPS	95	95	100	100	98	100	89	100	
E 284	E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS	82	81	88	100	84	88	73	50	
E 285	E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS	94	94	100	100	96	100	89	100	
E 286	E2-14 DO YOU INSPECT SOLDERED CONNECTIONS	98	98	100	100	98	100	98	100	
E 287	E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING	66	68	38	100	73	69	58	50	
E 288	E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING TOOLS	97	96	100	100	98	94	96	100	
E 289	E2-17 DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS	86	86	88	50	89	69	89	100	
E 290	E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL	37	36	50	50	36	31	33	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
E 291	E2-19 DO YOU MAKE HARDWIRE CONNECTIONS	93	93	100	100	93	99	91	100	
E 292	E2-20 DO YOU MAKE PRINTED CIRCUIT BOARD CONNECTIONS	97	96	100	100	98	100	93	100	
E 293	E2-21 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR CAPACITORS ON PRINTED CIRCUIT BOARDS	95	95	100	100	96	100	91	100	
E 294	E2-22 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID-STATE DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS	94	94	100	100	96	100	89	100	
E 295	E3-01 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB	93	93	100	100	93	99	91	100	
E 296	E3-02 DO YOU ADJUST RELAYS	43	40	88	100	38	44	36	100	
E 297	E3-03 DO YOU CLEAN RELAYS	60	59	75	100	60	56	53	100	
E 298	E3-04 DO YOU INSPECT RELAYS	85	85	88	100	84	88	82	100	
E 299	E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAYS	94	94	100	100	98	100	87	100	
E 300	E3-06 DO YOU REMOVE OR REPLACE PARTS OR RELAYS	28	27	38	0	31	31	20	100	
E 301	E3-07 DO YOU TROUBLESHOOT RELAYS	88	88	88	100	87	100	84	100	RELAYS
E 302	E3-08 DO YOU STRAIGHTEN RELAY CONTACTS	56	55	75	50	69	63	36	100	
E 303	E3-09 DO YOU PERFORM TASKS ON RELAY CONTACTS	51	49	88	50	60	50	36	100	
E 304	E3-10 DO YOU PERFORM TASKS ON RELAY CORES	13	14	13	50	22	6	7	50	
E 305	E3-11 DO YOU PERFORM TASKS ON RELAY COILS	17	17	13	50	24	6	11	50	
E 306	E3-12 DO YOU PERFORM TASKS ON RELAY ARMATURES	18	18	25	50	27	6	11	100	
E 307	E3-13 DO YOU PERFORM TASKS ON RELAY SPRINGS	24	23	50	50	31	6	18	100	
E 308	E3-14 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY OPER (NO) SCHEMATIC SYMBOLS FOR RELAYS	80	78	100	100	78	75	78	100	
E 309	E3-15 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW (SPST), NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS FOR RELAYS	78	77	100	100	73	75	78	100	
E 310	E3-16 DO YOU USE OR REFER TO SINGLE POLE, DOUBLE THROW (SPDT) SCHEMATIC SYMBOLS FOR RELAYS	72	71	88	100	71	75	67	100	
E 311	E3-17 DO YOU USE OR REFER TO DOUBLE POLE, DOUBLE THROW (DPDT) SCHEMATIC SYMBOLS FOR RELAYS	71	70	88	100	69	75	67	100	
E 312	E3-18 DO YOU USE OR REFER TO OTHER RELAY SYMBOLS SCHEMATIC SYMBOLS FOR RELAYS	73	71	100	100	73	69	71	100	
E 313	E3-19 DO YOU CHECK ELECTRICAL CONTINUITY OF COILS BY MEASURING RESISTANCE	76	76	88	100	73	88	71	100	
F 314	F1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH MICROPHONES	92	92	88	50	96	88	93	100	
F 315	F1-02 DO YOU INSPECT MICROPHONES	82	83	75	50	87	88	80	50	
F 316	F1-03 DO YOU CLEAN MICROPHONES	74	74	75	50	80	75	71	50	
F 317	F1-04 DO YOU OPERATE MICROPHONES	92	92	88	50	93	88	96	100	
F 318	F1-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT PARTS OR MICROPHONES	74	76	50	50	76	75	80	50	MICROPHONES
F 319	F1-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONE PARTS	46	46	50	0	51	44	42	50	
F 320	F1-07 DO YOU REMOVE OR REPLACE COMPLETE MICROPHONES	91	91	88	50	96	88	91	100	
F 321	F1-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS	50	50	50	0	64	38	40	50	
F 322	F1-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES	60	58	88	50	69	50	49	100	
F 323	F1-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES	24	26	0	50	22	31	29	0	
F 324	F1-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES	28	29	13	50	33	38	22	50	
F 325	F1-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES	55	53	75	50	60	50	49	50	
F 326	F1-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES	7	7	0	0	11	6	9	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
F 327	F2-01	IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH SPEAKERS	78	77	88	50	87	69	73	100	
F 328	F2-02	DO YOU INSPECT SPEAKERS	69	68	88	50	73	63	64	100	SPEAKERS
F 329	F2-03	DO YOU CLEAN SPEAKERS	46	46	50	50	49	38	47	50	
F 330	F2-04	DO YOU OPERATE SPEAKERS	71	72	63	50	84	63	64	100	
F 331	F2-05	DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT PARTS OF SPEAKERS	69	68	75	50	78	56	64	50	
F 332	F2-06	DO YOU TROUBLESHOOT DOWN TO SPEAKER PARTS	21	22	13	0	22	25	20	50	
F 333	F2-07	DO YOU REMOVE OR REPLACE COMPLETE SPEAKERS	76	75	88	50	87	63	69	100	
F 334	F2-08	DO YOU REMOVE OR REPLACE SPEAKER PARTS	12	12	13	0	11	19	9	50	
F 335	F2-09	DO YOU PERFORM ANY TASKS ON SPEAKER CONES	9	9	13	0	9	13	7	50	
F 336	F2-10	DO YOU PERFORM ANY TASKS ON SPEAKER SPIDERS	8	7	13	0	9	6	7	50	
F 337	F2-11	DO YOU PERFORM ANY TASKS ON SPEAKER FIELD COILS	8	7	13	0	9	6	7	50	
F 338	F2-12	DO YOU PERFORM ANY TASKS ON SPEAKER VOICE COILS	8	8	13	0	9	6	7	50	
F 339	F2-13	DO YOU PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS	9	9	13	0	9	6	9	50	
F 340	F2-14	DO YOU PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS	8	8	13	0	9	6	7	50	
F 341	F2-15	DO YOU PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES	8	7	13	0	9	6	7	50	
F 342	F3-01	DO YOU USE OSCILLOSCOPES IN YOUR PRESENT JOB	98	98	100	100	98	100	98	100	
F 343	F3-02	DO YOU USE OSCILLOSCOPES TO PERFORM OPERATIONAL CHECKS	92	91	100	100	96	100	82	100	
F 344	F3-03	DO YOU USE OSCILLOSCOPES TO PERFORM ALIGNMENTS OR ADJUSTMENTS	92	92	100	100	96	88	89	100	OSCILLOSCOPES
F 345	F3-04	DO YOU USE OSCILLOSCOPES TO TROUBLESHOOT ELECTRONIC CIRCUITS	95	95	100	100	96	94	93	100	
F 346	F3-05	DO YOU USE OSCILLOSCOPES TO MEASURE FREQUENCY	89	89	88	100	93	81	87	100	
F 347	F3-06	DO YOU USE OSCILLOSCOPES TO MEASURE TIME	87	86	88	100	96	81	78	100	
F 348	F3-07	DO YOU USE OSCILLOSCOPES TO OBSERVE LISAJOUS PATTERNS	38	38	38	100	47	38	27	50	
F 349	F3-08	DO YOU USE OSCILLOSCOPES TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES	88	87	100	50	84	100	87	100	
F 350	F3-09	DO YOU USE OSCILLOSCOPES TO MAKE FREQUENCY OR TIME MEASUREMENTS USING DELAY TIME MULTIPLIERS	71	69	88	100	62	88	67	100	
F 351	F3-10	DO YOU USE OSCILLOSCOPES TO MEASURE AC VOLTAGE	90	90	88	100	91	94	87	100	
F 352	F3-11	DO YOU USE OSCILLOSCOPES TO MEASURE OR OBSERVE SIGNALS AFTER FIRST ADJUSTING THE GAIN AND DC BAL CONTROLS	77	77	75	0	82	81	73	100	
F 353	F3-12	DO YOU USE OSCILLOSCOPES TO MEASURE DC VOLTAGE	95	95	100	100	96	100	91	100	
G 354	G1-01	DO YOU WORK WITH SEMICONDUCTOR DIODES IN YOUR PRESENT JOB	95	95	100	100	96	100	91	100	
G 355	G1-02	DO YOU INSPECT DIODES	90	89	100	100	89	100	84	100	
G 356	G1-03	DO YOU REMOVE OR REPLACE DIODES	96	95	100	100	98	100	91	100	SEMICONDUCTOR DIODES
G 357	G1-04	DO YOU CHECK DIODES USING AN INSTRUMENT	92	91	100	100	93	100	87	100	
G 358	G1-05	DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES	13	14	13	50	18	13	9	0	
G 359	G1-06	DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES, TOGETHER WITH VALUES OF FORWARD AND REVERSE BIAS VOLTAGE, TO COMPUTE FORWARD OR REVERSE BIAS RESISTANCE	19	19	25	50	22	6	18	50	
G 360	G1-07	DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES	19	20	13	50	27	19	11	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083
G 361	61-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF DIODES	64	65	50	100	67	56	69	0
G 362	61-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS, BASED ON THEIR PHYSICAL APPEARANCE	83	82	100	100	84	88	80	100
G 363	61-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW	13	12	38	0	11	19	9	50
G 364	61-11 DO YOU USE OR REFER TO MEASUREMENTS OF FORWARD BIAS RESISTANCE	62	61	75	50	64	75	51	50
G 365	61-12 DO YOU USE OR REFER TO DIODE COLOR CODING	97	97	50	0	97	50	97	100
G 366	61-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	5	5	0	0	9	0	4	0
G 367	61-14 DO YOU USE OR REFER TO CENTRIPETAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	4	5	0	0	7	6	2	0
G 368	61-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538	85	84	100	50	84	88	82	100
G 369	61-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT	8	7	13	0	9	6	7	0
G 370	61-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN ELECTRON MOVING IN ORBIT	7	6	13	0	9	6	4	0
G 371	61-18 DO YOU USE OR REFER TO MEASUREMENTS OF REVERSE BIAS RESISTANCE	56	55	75	50	56	69	49	50
G 372	61-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT	8	8	13	50	9	6	7	0
G 373	61-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS OF AN ORBITING ELECTRON	7	7	0	50	9	6	4	0
G 374	61-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON	7	7	0	50	9	6	4	0
G 375	61-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL)	10	10	13	50	13	6	7	0
G 376	61-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM)	9	9	13	50	11	6	7	0
G 377	61-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END	82	80	100	100	80	75	82	100
G 378	61-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES SUCH AS GERMANIUM OR SILICON	27	25	50	50	13	44	29	50
G 379	61-26 DO YOU NEED TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS OF RESISTANCE (AS TEMPERATURE INCREASES RESISTANCE DECREASES)	42	42	38	0	42	38	47	0
G 380	61-27 DO YOU USE OR REFER TO PN JUNCTION DIODE CHARACTERISTIC CURVES, SUCH AS VOLTAGE - CURRENT CHARACTERISTIC CURVES (PERHAPS YOU DO THIS TO IDENTIFY POINTS OF STRUCTURAL BREAKDOWN OR OPERATING REGIONS)	24	23	63	100	22	13	24	100
G 381	61-28 DO YOU DETERMINE WHETHER PN JUNCTION DIODES ARE FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR INTERPRET CIRCUIT DIAGRAMS	72	73	63	50	76	81	71	100
G 382	61-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS	10	11	0	0	13	6	9	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
G 383	G1-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS	9	10	0	0	13	6	9	0	
G 384	G1-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS	12	12	13	0	13	13	11	0	
G 385	G1-32 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS	11	12	0	0	16	6	11	0	
G 386	G1-33 DO YOU USE OR REFER TO ELECTRON-HOLE PAIR CREATED IN SEMICONDUCTORS	10	11	0	0	9	19	11	0	
G 387	G1-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS	22	22	25	0	24	25	18	0	
G 388	G1-35 DO YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTORS	11	12	0	50	11	19	9	0	
G 389	G1-36 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS	12	13	0	50	13	13	11	0	
G 390	G1-37 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL	95	94	50	100	36	63	94	50	
G 391	G1-38 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL	95	94	50	100	38	63	92	50	
G 392	G1-39 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS	15	16	0	50	13	31	11	0	
G 393	G1-40 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS	15	16	0	50	13	31	11	0	
G 394	G1-41 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS	11	11	13	50	9	19	9	0	
G 395	G1-42 DO YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS	13	13	13	50	11	19	11	0	
G 396	G1-43 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL	14	14	25	50	11	19	13	0	
G 397	G1-44 DO YOU USE OR REFER TO THE 10:1 BACK TO FRONT RESISTANCE RATIO FOR DIODES	29	27	63	0	27	19	31	100	
G 398	G1-45 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS	9	9	13	50	9	6	9	0	
G 399	G1-46 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION	65	64	75	50	56	63	71	100	
G 400	G1-47 DO YOU USE OR REFER TO MAXIMUM AVERAGE FORWARD CURRENT DIODE RATINGS	29	28	50	50	24	25	33	50	
G 401	G1-48 DO YOU USE OR REFER TO PEAK RECURRENT FORWARD CURRENT DIODE RATINGS	27	25	50	50	22	25	29	50	
G 402	G1-49 DO YOU USE OR REFER TO MAXIMUM SURGE CURRENT DIODE RATINGS	30	28	63	50	22	31	33	100	
G 403	G1-50 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE DIODE RATINGS	39	37	75	50	27	44	92	100	
G 404	G2-01 DO YOU WORK WITH TRANSISTORS IN YOUR PRESENT JOB.	92	91	100	100	94	88	87	100	
G 405	G2-02 DO YOU INSPECT TRANSISTORS	84	83	100	100	82	88	80	100	
G 406	G2-03 DO YOU REMOVE OR REPLACE TRANSISTORS	93	93	100	100	98	94	87	100	
G 407	G2-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT	91	91	88	100	96	94	84	100	TRANSISTORS
G 408	G2-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	79	78	88	100	82	88	69	100	
G 409	G2-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	82	81	88	100	82	88	76	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		DT-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
G 410	G2-07	DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS	80	79	88	100	78	88	76	100	
G 411	G2-08	DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION	25	25	25	0	29	25	22	0	
G 412	G2-09	DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION	24	23	25	0	24	25	22	0	
G 413	G2-10	DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER)	48	48	50	50	44	31	53	50	
G 414	G2-11	DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR	23	21	50	50	18	25	18	50	
G 415	G2-12	DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS	97	96	100	100	96	100	96	100	
G 416	G2-13	DO YOU USE OR REFER TO TRANSISTOR NOTATION SUCH AS Q1, Q2, Q3, ETC	95	95	100	100	93	94	96	100	
G 417	G2-14	DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION	77	77	88	50	64	81	87	100	
G 418	G2-15	DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT IB IS NORMALLY SIGNIFICANTLY SMALLER THAN THE EMITTER CURRENT IE (USUALLY IB BEING 2 TO 8 PERCENT OF IE)	35	34	50	50	33	50	29	100	
G 419	G2-16	DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE CONTROLLING FACTOR FOR TRANSISTORS	48	46	75	50	42	56	44	100	
G 420	G2-17	DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT (ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE INCREASES	24	24	25	0	18	31	24	0	
G 421	G2-18	DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES	43	40	88	100	20	50	51	100	
G 422	G2-19	DO YOU USE OR REFER TO BETA TRANSISTOR GAINS	19	18	38	50	18	19	16	0	
G 423	G2-20	DO YOU USE OR REFER TO ALPHA TRANSISTOR GAINS	18	16	38	50	16	19	13	0	
G 424	G2-21	DO YOU USE OR REFER TO GAMMA TRANSISTOR GAINS	17	15	38	50	16	19	11	0	
G 425	G2-22	DO YOU CALCULATE BETA TRANSISTOR GAINS	11	10	25	50	7	13	9	50	
G 426	G2-23	DO YOU CALCULATE ALPHA TRANSISTOR GAINS	10	10	13	50	7	13	9	0	
G 427	G2-24	DO YOU CALCULATE GAMMA TRANSISTOR GAINS	10	10	13	50	7	13	9	0	
G 428	G3-01	DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB	84	83	100	100	87	69	84	100	
G 429	G3-02	DO YOU INSPECT TRANSISTOR AMPLIFIERS	77	76	100	100	76	75	76	100	
G 430	G3-03	DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS	73	72	88	50	73	75	71	100	
G 431	G3-04	DO YOU TROUBLESHOOT TO THE AMPLIFIER CIRCUIT LEVEL	79	78	88	100	80	75	78	100	
G 432	G3-05	DO YOU TROUBLESHOOT TO AMPLIFIER COMPONENTS	77	77	88	50	80	75	76	100	TRANSISTOR AMPLIFIERS
G 433	G3-06	DO YOU REMOVE OR REPLACE THE COMPLETE AMPLIFIER	82	81	100	100	84	75	80	100	
G 434	G3-07	DO YOU REMOVE OR REPLACE AMPLIFIER COMPONENTS	76	75	88	50	78	75	73	100	
G 435	G3-08	DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN BASE CURRENT	33	32	50	0	38	31	27	50	
G 436	G3-09	DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A SPECIFIC CHANGE IN BASE CURRENT	20	19	38	0	20	25	18	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	UY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083
G 437	63-10 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A CHANGE IN BASE CURRENT	32	31	50	0	33	31	29	50
G 438	63-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A SPECIFIC CHANGE IN BASE CURRENT	18	17	38	0	16	19	20	50
G 439	63-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL	33	32	50	0	36	19	36	50
G 440	63-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN BASE CURRENT WHICH RESULTS FROM A SPECIFIC INPUT SIGNAL	21	19	50	0	18	19	22	50
G 441	63-14 DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS IN YOUR CIRCUIT ANALYSIS (THIS METHOD REQUIRES YOU TO PLOT A LOAD-LINE ON A TRANSISTOR CHARACTERISTIC CURVE)	9	8	25	0	9	6	9	50
G 442	63-15 DO YOU USE OR REFER TO THE OPERATING POINT Q (QUIESCENT POINT) FOR A TRANSISTOR	14	14	25	50	13	13	13	50
G 443	63-16 DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A PARTICULAR TRANSISTOR	6	6	0	0	7	6	7	0
G 444	63-17 DO YOU MEASURE VOLTAGE GAIN USED IN THE COMMON EMITTER CONFIGURATION	54	52	75	50	49	56	56	100
G 445	63-18 DO YOU MEASURE CURRENT GAIN USED IN THE COMMON EMITTER CONFIGURATION	41	40	63	50	42	31	40	100
G 446	63-19 DO YOU MEASURE POWER GAIN USED IN THE COMMON EMITTER CONFIGURATION	37	35	63	0	36	31	38	100
G 447	63-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS, DO YOU DIVIDE THE CHANGE IN BASE-EMITTER VOLTAGE INTO THE CHANGE THE BASE COLLECTOR VOLTAGE TO DETERMINE THE VOLTAGE GAIN	13	11	38	0	11	19	9	50
G 448	63-21 DO YOU CALCULATE THE CURRENT GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS, DO YOU DIVIDE THE CHANGE IN BASE CURRENT INTO THE CHANGE IN COLLECTOR CURRENT TO DETERMINE THE CURRENT GAIN	11	9	38	0	11	6	9	50
G 449	63-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA THAT IS, DO YOU MULTIPLY THE CURRENT GAIN TIMES THE VOLTAGE GAIN TO DETERMINE THE POWER GAIN	10	9	25	0	9	13	9	50
G 450	63-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT IS GENERATED WITH LESS COLLECTOR VOLTAGE AS TEMPERATURE INCREASES (THIS AFFECTS THE STATIC OPERATING POINT [Q] OF THE TRANSISTOR)	15	15	13	0	13	19	16	0
G 451	63-24 DO YOU COMPUTE THE STATIC OPERATING POINT [Q] OF A TRANSISTOR AT DIFFERENT TEMPERATURES	10	10	13	0	9	13	11	0
G 452	63-25 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH EMITTER (SWAMPING) RESISTOR STABILIZATION	39	37	63	50	38	31	38	100
G 453	63-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH SELF-BIAS STABILIZATION	38	36	63	50	38	38	33	100

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083
G 454	63-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH THERMISTOR STABILIZATION	30	30	38	50	33	25	27	50
G 455	63-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH FORWARD BIAS DIODE STABILIZATION	40	39	63	0	38	38	42	100
G 456	63-29 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH REVERSE BIAS DIODE STABILIZATION	40	39	63	50	38	38	40	100
G 457	63-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH DOUBLE DIODE STABILIZATION	32	32	38	50	29	31	33	50
G 458	63-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM EMITTER (SWAMPING) RESISTOR STABILIZATION	45	43	63	50	38	31	51	100
G 459	63-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM SELF-BIAS STABILIZATION	45	44	63	50	38	38	51	100
G 460	63-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THERMISTOR STABILIZATION	32	33	13	50	31	25	38	0
G 461	63-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM FORWARD BIAS DIODE STABILIZATION	43	43	38	0	36	38	56	50
G 462	63-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM REVERSE BIAS DIODE STABILIZATION	44	44	38	50	36	38	56	50
G 463	63-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM DOUBLE DIODE STABILIZATION	35	35	38	50	29	25	44	50
G 464	63-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS	55	53	88	50	49	63	56	100
G 465	63-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF AMPLITUDE DISTORTION	61	59	88	0	58	56	64	100
G 466	63-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS	54	52	75	50	53	44	58	100
G 467	63-40 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS	48	47	63	0	47	44	51	50
G 468	63-41 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION	47	45	75	0	44	44	49	100
G 469	63-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF FREQUENCY DISTORTION	50	48	75	50	47	44	53	100
G 470	63-43 DO YOU NEED TO KNOW THE DEGENERATIVE EFFECTS ON THE CIRCUIT CAUSED BY CHANGING EMITTER RESISTANCE FOR TRANSISTOR AMPLIFIERS IN THE COMMON COLLECTOR CONFIGURATION	20	20	25	0	20	31	18	0
G 471	63-44 DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS	29	27	50	0	27	31	29	50
G 472	63-45 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	37	36	50	50	38	19	42	50
G 473	63-46 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	63	61	88	50	69	44	64	100
G 474	63-47 DO YOU TROUBLESHOOT OR REPAIR COMPLEMENTARY SYMMETRY CIRCUITS	34	33	38	50	38	13	38	50
G 475	63-48 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	40	38	75	50	38	31	42	100

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
G	476	63-49 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	92	91	63	50	94	19	94	50	
M	477	H1-01 DO YOU USE OR REFER TO VARACTORS	25	24	38	0	22	17	29	50	
M	478	H1-02 DO YOU USE OR REFER TO TUNNEL DIODES	38	36	63	50	24	31	51	100	SOLID-STATE SPECIAL PURPOSE
M	479	H1-03 DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET)	65	64	75	50	49	75	76	100	DEVICES
M	480	H1-04 DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS	39	37	63	50	31	25	49	100	
M	481	H1-05 DO YOU USE OR REFER TO ZENER DIODES	91	90	100	100	89	88	91	100	
M	482	H1-06 DO YOU USE OR REFER TO INTEGRATED CIRCUITS	92	91	100	100	84	94	96	100	
M	483	H2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES	96	95	100	100	96	100	93	100	
M	484	H2-02 DO YOU INSPECT POWER SUPPLIES	90	89	100	100	87	94	89	100	
M	485	H2-03 DO YOU CLEAN POWER SUPPLIES	85	85	88	100	80	94	84	100	
M	486	H2-04 DO YOU ALIGN OR ADJUST POWER SUPPLIES	93	93	100	100	93	100	89	100	
M	487	H2-05 DO YOU TROUBLESHOOT TO POWER SUPPLY CIRCUIT LEVEL	88	87	100	100	82	100	87	100	
M	488	H2-06 DO YOU TROUBLESHOOT TO POWER SUPPLY COMPONENTS	80	78	100	100	62	100	84	100	
M	489	H2-07 DO YOU REMOVE OR REPLACE COMPLETE POWER SUPPLIES	96	95	100	100	98	100	91	100	POWER SUPPLIES
M	490	H2-08 DO YOU REMOVE OR REPLACE POWER SUPPLY COMPONENTS	82	80	100	100	67	100	84	100	
M	491	H2-09 DO YOU WORK WITH HALF-WAVE RECTIFIERS	66	65	75	100	58	75	67	100	
M	492	H2-10 DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS	73	73	75	100	64	88	76	100	
M	493	H2-11 DO YOU WORK WITH BRIDGE RECTIFIERS	76	75	88	100	71	75	78	100	
M	494	H2-12 DO YOU WORK WITH THREE-PHASE RECTIFIERS	38	38	38	0	36	44	40	50	
M	495	H2-13 DO YOU USE OR REFER TO INPUT VOLTAGE	76	76	88	100	67	88	78	100	
M	496	H2-14 DO YOU USE OR REFER TO INPUT FREQUENCY	56	58	38	100	53	69	56	50	
M	497	H2-15 DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE	66	65	75	50	58	75	69	100	
M	498	H2-16 DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE	66	64	88	100	58	81	62	100	
M	499	H2-17 DO YOU USE OR REFER TO RIPPLE AMPLITUDE	53	52	63	100	40	63	56	100	
M	500	H2-18 DO YOU USE OR REFER TO RIPPLE FREQUENCY	50	50	50	100	42	56	51	50	
M	501	H2-19 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE	45	45	50	50	38	69	42	50	
M	502	H2-20 DO YOU USE OR REFER TO SHAPE OF OUTPUT WAVEFORMS	71	71	75	100	60	81	76	100	
M	503	H2-21 DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE	74	74	75	100	67	88	73	100	
M	504	H2-22 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE FILTERS	68	68	75	50	64	75	67	100	
M	505	H2-23 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE FILTERS	52	51	63	50	42	44	60	100	
M	506	H2-24 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS	52	51	63	50	51	38	53	100	
M	507	H2-25 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS	47	46	63	50	42	38	49	100	
M	508	H2-26 DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS	44	42	63	50	44	31	40	100	
M	509	H2-27 DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS	49	47	75	50	49	38	44	100	
M	510	H2-28 DO YOU WORK WITH CIRCUITS WHICH EMPLOY DON'T REMEMBER WHICH TYPE OF FILTER	44	46	13	50	44	56	42	0	
M	511	H2-29 DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER	16	17	0	0	13	0	24	0	
M	512	H3-01 DO YOU WORK WITH OSCILLATORS IN YOUR PRESENT JOB	62	61	75	50	56	50	73	100	OSCILLATORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
M 513	M3-02 DO YOU INSPECT OSCILLATORS	50	49	75	50	44	50	53	100	
M 514	M3-03 DO YOU ALIGN OR ADJUST OSCILLATORS	50	49	75	50	44	50	53	100	
M 515	M3-04 DO YOU REMOVE OR REPLACE COMPLETE OSCILLATORS	55	53	75	50	49	50	60	100	
M 516	M3-05 DO YOU REMOVE OR REPLACE OSCILLATOR COMPONENTS	38	38	38	0	36	50	40	50	
M 517	M3-06 DO YOU TROUBLESHOOT TO OSCILLATOR CIRCUIT LEVEL	49	47	75	0	44	50	53	100	
M 518	M3-07 DO YOU TROUBLESHOOT TO OSCILLATOR COMPONENTS	35	35	38	0	29	50	40	50	
M 519	M3-08 DO YOU USE OR REFER TO FEEDBACK	56	54	88	50	53	38	62	100	
M 520	M3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES (FDD)	35	33	63	50	27	31	40	50	
M 521	M3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY	36	34	63	50	31	25	40	50	
M 522	M3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY	38	35	75	50	31	31	40	100	
M 523	M3-12 DO YOU USE OR REFER TO DAMPING	40	37	88	50	38	25	40	100	
M 524	M3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK	45	42	75	50	42	25	49	100	
M 525	M3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT	13	14	0	50	11	13	16	0	
M 526	M3-15 DO YOU USE OR REFER TO CRITICAL DAMPING	18	17	38	50	11	13	22	0	
M 527	M3-16 DO YOU USE OR REFER TO UNDER DAMPING	21	20	38	50	11	19	27	0	
M 528	M3-17 DO YOU USE OR REFER TO OVER DAMPING	21	20	38	50	11	19	27	0	
M 529	M3-18 DO YOU WORK WITH OSCILLATORS WHICH USE LC TANK CIRCUITS AS FDD	30	28	63	0	22	25	36	100	
M 530	M3-19 DO YOU WORK WITH OSCILLATORS WHICH USE RC NETWORKS AS FDD	34	32	63	0	29	25	40	100	
M 531	M3-20 DO YOU WORK WITH OSCILLATORS WHICH USE CRYSTALS AS FDD	30	30	38	50	27	25	33	50	
M 532	M3-21 DO YOU WORK WITH OSCILLATORS WHICH USE DON'T REMEMBER WHICH TYPE OF FDD	29	30	13	50	24	19	40	0	
M 533	M3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL OSCILLATORS	18	16	50	50	11	19	20	50	
M 534	M3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS	18	17	38	50	11	19	22	50	
M 535	M3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS	18	17	38	50	11	19	22	50	
M 536	M3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS	12	10	38	50	9	6	11	50	
M 537	M3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS	10	9	25	50	9	6	9	0	
M 538	M3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF OSCILLATORS	43	43	38	50	36	38	53	50	
I 539	I1-01 DO YOU WORK WITH MULTIVIBRATORS IN YOUR PRESENT JOB	54	54	50	100	44	44	67	100	
I 540	I1-02 DO YOU INSPECT WAVE GENERATING OR SHAPING CIRCUITS	45	44	63	100	38	31	53	100	
I 541	I1-03 DO YOU ALIGN OR ADJUST WAVE GENERATING OR SHAPING CIRCUITS	45	43	63	100	40	31	49	100	
I 542	I1-04 DO YOU CALIBRATE WAVE GENERATING OR SHAPING CIRCUITS	39	38	63	50	38	31	42	100	
I 543	I1-05 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUITS	47	46	63	100	42	31	53	100	MULTIVIBRATORS
I 544	I1-06 DO YOU TROUBLESHOOT TO WAVE GENERATING OR SHAPING CIRCUIT COMPONENTS	44	43	50	50	36	38	53	50	
I 545	I1-07 DO YOU REMOVE OR REPLACE COMPLETE WAVE GENERATING OR SHAPING CIRCUITS	45	43	63	100	36	38	51	100	
I 546	I1-08 DO YOU REMOVE OR REPLACE WAVE GENERATING OR SHAPING COMPONENTS	42	41	50	50	36	31	51	50	
I 547	I1-09 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN LC TANK CIRCUITS	31	30	50	50	27	25	36	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
I 548	11-10 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN RC NETWORKS	35	34	50	50	29	25	42	50	
I 549	11-11 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN CRYSTALS	27	27	25	50	22	13	36	50	
I 550	11-12 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN DON'T REMEMBER WHICH TYPE OF FDD	21	22	13	100	20	13	24	0	
I 551	11-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS	95	95	50	100	38	94	53	100	
I 552	11-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS	95	94	63	100	33	94	53	100	
I 553	11-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS	96	95	63	100	38	94	51	100	
I 554	11-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE MULTIVIBRATORS	14	14	13	50	11	6	20	0	
I 555	12-01 DO YOU WORK WITH LIMITERS OR CLAMPERS IN YOUR PRESENT JOB	55	53	88	100	36	56	67	100	
I 556	12-02 DO YOU WORK WITH SERIES DIODE LIMITERS	43	41	75	100	27	50	51	100	
I 557	12-03 DO YOU WORK WITH SHUNT DIODE LIMITERS	39	37	63	50	22	44	47	100	
I 558	12-04 DO YOU WORK WITH LIMITERS WITH BIAS	29	27	63	50	22	38	29	100	LIMITERS AND CLAMPERS
I 559	12-05 DO YOU WORK WITH ZENER DIODE LIMITERS	44	41	75	50	29	50	51	100	
I 560	12-06 DO YOU WORK WITH TRANSISTOR LIMITERS	37	36	50	50	24	50	42	50	
I 561	12-07 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF LIMITERS	18	19	13	100	7	13	29	0	
I 562	12-08 DO YOU WORK WITH BASIC DIODE CLAMPING CIRCUITS	33	31	63	50	22	44	33	50	
I 563	12-09 DO YOU WORK WITH DIODE CLAMPING CIRCUITS WITH BIAS	30	29	50	50	22	44	31	50	
I 564	12-10 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF CLAMPING CIRCUIT	24	23	25	100	7	13	40	50	
I 565	13-01 IN YOUR PRESENT JOB, DO YOU WORK ON EQUIPMENT WHICH CONTAINS ELECTRON TUBES	31	29	63	0	24	31	36	50	
I 566	13-02 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD	25	23	63	0	22	31	22	50	
I 567	13-03 DO YOU USE TUBE TESTERS TO CHECK ELECTRON TUBES	18	19	63	0	18	13	13	50	
I 568	13-04 DO YOU USE MULTIMETERS TO CHECK ELECTRON TUBES	18	19	13	0	16	31	20	50	ELECTRON TUBES
I 569	13-05 DO YOU USE SCOPES TO CHECK ELECTRON TUBES	18	18	13	0	11	31	22	50	
I 570	13-06 DO YOU USE SUBSTITUTION TO CHECK ELECTRON TUBES	23	21	50	0	22	19	22	50	
I 571	13-07 DO YOU USE OR REFER TO CUTOFF	10	9	25	0	9	13	9	50	
I 572	13-08 DO YOU USE OR REFER TO PEAK INVERSE VOLTAGE RATING	9	8	25	0	9	13	7	50	
I 573	13-09 DO YOU USE OR REFER TO PEAK CURRENT RATING	11	10	25	0	9	19	9	50	
I 574	13-10 DO YOU USE OR REFER TO TRANSIT TIME	4	4	13	0	4	6	2	0	
I 575	13-11 DO YOU USE OR REFER TO PLATE DISSIPATION RATING	6	5	13	0	7	6	4	50	
I 576	13-12 DO YOU USE OR REFER TO SATURATION	15	13	50	0	11	25	11	50	
I 577	13-13 DO YOU USE OR REFER TO DC PLATE RESISTANCE	8	6	25	0	9	6	4	50	
I 578	13-14 DO YOU COMPUTE ACTUAL VALUES OF THE DC PLATE RESISTANCE FOR ELECTRON TUBES	3	3	13	0	4	6	0	0	
I 579	13-15 DO YOU USE OR REFER TO PLATE VOLTAGE	18	15	63	0	11	25	18	50	
I 580	13-16 DO YOU USE OR REFER TO PLATE CURRENT	10	8	38	0	11	13	4	50	
I 581	13-17 DO YOU USE OR REFER TO GRID VOLTAGE	16	14	50	0	11	19	16	50	
I 582	13-18 DO YOU USE OR REFER TO GRID CURRENT	9	8	25	0	11	13	4	50	
I 583	13-19 DO YOU USE OR REFER TO CATHODE VOLTAGE	18	15	50	0	11	31	16	50	
I 584	13-20 DO YOU USE OR REFER TO CATHODE CURRENT	10	9	25	0	11	19	4	50	
I 585	13-21 DO YOU USE OR REFER TO THE TRIODE AMPLIFICATION FACTOR (THE AMPLIFICATION FACTOR FOR TRIODES IS DEFINED AS THE RATIO OF CHANGE IN PLATE VOLTAGE TO A CHANGE IN GRID VOLTAGE)	6	5	25	0	7	6	2	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 074	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083
I 586	I3-22 DO YOU CALCULATE ACTUAL VALUES OF TRIODE AMPLIFICATION FACTORS	5	4	25	0	4	6	2	50
I 587	I3-23 DO YOU USE OR REFER TO MULTIGRID (TETRODE, PENTODE, ETC) AMPLIFICATION FACTORS	8	6	38	0	7	6	7	50
I 588	I3-24 DO YOU USE OR REFER TO ELECTRON TUBE TRANSCONDUCTANCE (G, WHICH IS MEASURED IN MHOS)	3	3	13	0	4	6	0	0
I 589	I3-25 DO YOU CALCULATE ACTUAL VALUES OF ELECTRON TUBE TRANSCONDUCTANCES	3	3	13	0	4	6	0	0
I 590	I3-26 DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE	4	4	13	0	4	6	2	0
I 591	I3-27 DO YOU CALCULATE ACTUAL VALUES OF AC PLATE RESISTANCE	3	3	13	0	4	6	0	0
I 592	I3-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE	4	3	25	0	4	6	0	50
I 593	I3-29 DO YOU USE OR REFER TO CHARACTERISTIC CURVES IN YOUR WORK WITH ELECTRON TUBES	5	5	13	0	4	6	4	50
I 594	I3-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS	8	8	13	0	7	19	7	50
I 595	I3-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS	7	6	13	0	7	13	4	50
I 596	I3-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF	8	8	13	0	7	19	7	50
I 597	I3-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION	8	7	13	0	7	19	4	50
I 598	I3-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN	13	9	63	0	11	13	7	50
I 599	I3-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY	8	6	38	0	9	13	2	50
I 600	I3-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	10	10	13	0	11	6	11	0
I 601	I3-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	15	12	63	0	11	19	11	50
I 602	I3-38 DO YOU USE OSCILLOSCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	12	9	50	0	9	19	7	50
I 603	I3-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	5	5	13	0	7	6	2	50
I 604	I3-40 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES SUCH AS INPUT CAPACITANCE	3	4	0	0	4	6	2	0
I 605	I3-41 DO YOU USE OR REFER TO TUBE SOCKET NOTATION	21	18	63	0	16	31	18	50
I 606	I3-42 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS	21	18	63	0	16	31	18	50
I 607	I3-43 DO YOU USE OR REFER TO THE TYPE OF MATERIAL OR THE OPERATING TEMPERATURE OF THE EMITTING SURFACE IN THE ELECTRON TUBES YOU WORK ON	3	3	13	0	4	6	0	50
I 608	I3-44 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL SUCH AS MANUALS OR CHARTS	14	12	50	0	11	25	9	50
J 609	J1-01 DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS OR CIRCUITS IN YOUR PRESENT JOB	17	14	50	0	18	13	13	50
J 610	J1-02 DO YOU DETERMINE THE CLASS OF OPERATION FOR ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS	7	5	25	0	7	13	2	50

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 076	SPC 077	SPC 080	SPC 081	SPC 082	SPC 083	
J 611	J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	7	5	25	0	7	13	2	50	
J 612	J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	8	6	38	0	9	13	2	50	
J 613	J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	6	5	25	0	7	6	2	50	
J 614	J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	8	6	38	0	9	13	2	50	
J 615	J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF AMPLIFIER	7	6	13	0	7	0	9	0	
J 616	J2-01 DO YOU WORK WITH GAS TUBES (NOT CATHODE OR COLD CATHODE)	9	8	25	0	9	13	7	50	
J 617	J2-02 DO YOU WORK WITH CATHODE-RAY TUBES	34	34	38	0	29	56	40	50	
J 618	J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES	7	5	25	0	4	19	2	50	
J 619	J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED	6	5	25	0	0	19	4	50	SPECIAL PURPOSE ELECTRON TUBES
J 620	J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THYRATRONS	3	3	13	0	4	6	0	50	
J 621	J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATRONS ARE USED	3	3	13	0	2	6	2	50	
J 622	J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTRON GUNS OF CATHODE-RAY TUBES (CRT)	26	26	25	0	16	44	33	50	
J 623	J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROMAGNETIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES (CRT)	23	23	13	0	13	44	29	0	
J 624	J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROSTATIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES (CRT)	21	22	13	0	11	44	27	0	
J 625	J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS	22	22	25	0	16	31	27	0	
J 626	J2-11 DO YOU USE OR REFER TO AQUADAG COATINGS	14	14	13	0	9	31	16	0	
J 627	J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS	12	12	13	0	7	25	13	0	
J 628	J2-13 DO YOU USE OR REFER TO PERSISTENCE	22	21	38	0	9	31	31	50	
J 629	J2-14 DO YOU USE OR REFER TO DECAY TIMES	14	14	25	0	7	25	18	0	
J 630	J2-15 DO YOU USE OR REFER TO FLUORESCENCE	16	15	25	0	9	31	18	0	
J 631	J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCE	18	18	25	0	9	31	24	0	
J 632	J3-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSYEMS IN YOUR PRESENT JOB	15	15	13	0	20	0	18	0	
J 633	J3-02 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	5	5	13	0	7	0	4	0	
J 634	J3-03 DO YOU PERFORM TASKS ON FREQUENCY MIXERS	4	4	13	0	4	0	4	0	
J 635	J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	2	0	2	0	HETERODYNING, MODULATION, AND DEMODULATION
J 636	J3-05 DO YOU PERFORM TASKS ON REACTANCE MODULATORS	2	2	0	0	0	0	4	0	
J 637	J3-06 DO YOU PERFORM TASKS ON MODULATED OSCILLATORS	4	4	13	0	4	0	4	0	
K 638	K1-01 DO YOU WORK ON AM TRANSMIT OR RECEIVE SYSYEMS IN YOUR PRESENT JOB	3	4	0	0	4	0	2	0	
K 639	K1-02 DO YOU INSPECT AM TRANSMIT OR RECEIVE SYSTEMS	3	3	0	0	2	0	2	0	
K 640	K1-03 DO YOU CLEAN AM TRANSMIT OR RECEIVE SYSTEMS	3	3	0	0	2	0	2	0	
K 641	K1-04 DO YOU ALIGN OR ADJUST AM TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	2	0	0	0	AM SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DT-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
K 642	K1-05 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE SYSTEMS	3	3	0	0	2	0	2	0	
K 643	K1-06 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE COMPONENTS	3	3	0	0	2	0	2	0	
K 644	K1-07 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE SYSTEMS	3	3	0	0	2	0	2	0	
K 645	K1-08 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE COMPONENTS	3	3	0	0	2	0	2	0	
K 646	K1-09 DO YOU PERFORM TASKS ON RF OSCILLATORS	2	2	0	0	2	0	0	0	
K 647	K1-10 DO YOU PERFORM TASKS ON RF AMPLIFIERS	2	2	0	0	2	0	0	0	
K 648	K1-11 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	3	3	0	0	2	0	2	0	
K 649	K1-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	3	3	0	0	2	0	2	0	
K 650	K1-13 DO YOU PERFORM TASKS ON LOCAL OSCILLATORS	3	3	0	0	2	0	2	0	
K 651	K1-14 DO YOU PERFORM TASKS ON IF AMPLIFIERS	3	3	0	0	2	0	2	0	
K 652	K1-15 DO YOU PERFORM TASKS ON DETECTORS	3	3	0	0	2	0	2	0	
K 653	K1-16 DO YOU PERFORM TASKS ON DON'T REMEMBER WHICH AM STAGE	1	1	0	0	0	0	2	0	
K 654	K1-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS	2	2	0	0	2	0	2	0	
K 655	K1-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS	2	2	0	0	2	0	2	0	
K 656	K1-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS	3	3	0	0	2	0	2	0	
K 657	K1-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS	3	3	0	0	4	0	2	0	
K 658	K1-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION	2	2	0	0	0	0	2	0	
K 659	K1-22 DO YOU USE OR REFER TO BANDPASS DISTORTION	2	2	0	0	0	0	2	0	
K 660	K1-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION	1	1	0	0	0	0	0	0	
K 661	K1-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE	2	2	0	0	2	0	2	0	
K 662	K1-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS	1	1	0	0	0	0	2	0	
K 663	K1-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS	1	1	0	0	0	0	2	0	
K 664	K1-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS	1	1	0	0	0	0	2	0	
K 665	K1-28 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS	3	3	0	0	4	0	2	0	
K 666	K2-01 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	1	1	0	0	0	0	2	0	
K 667	K2-02 DO YOU INSPECT FM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	0	0	2	0	
K 668	K2-03 DO YOU CLEAN FM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	0	0	2	0	
K 669	K2-04 DO YOU ALIGN FM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	0	0	2	0	
K 670	K2-05 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	0	0	2	0	FM SYSTEMS
K 671	K2-06 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE COMPONENTS	1	1	0	0	0	0	2	0	
K 672	K2-07 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	0	0	2	0	
K 673	K2-08 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE COMPONENTS	1	1	0	0	0	0	2	0	
K 674	K2-09 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	1	1	0	0	0	0	2	0	
K 675	K2-10 DO YOU PERFORM TASKS ON FREQUENCY MULTIPLIERS	1	1	0	0	0	0	2	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
K 676	K2-11 DO YOU PERFORM TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS)	1	1	0	0	0	0	2	0	
K 677	K2-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	1	1	0	0	0	0	2	0	
K 678	K2-13 DO YOU PERFORM TASKS ON RF AMPLIFIERS	1	1	0	0	0	0	2	0	
K 679	K2-14 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	1	1	0	0	0	0	2	0	
K 680	K2-15 DO YOU PERFORM TASKS ON IF AMPLIFIERS	1	1	0	0	0	0	2	0	
K 681	K2-16 DO YOU PERFORM TASKS ON LIMITERS	1	1	0	0	0	0	2	0	
K 682	K2-17 DO YOU PERFORM TASKS ON FREQUENCY DISCRIMINATORS	1	1	0	0	0	0	2	0	
K 683	K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS	1	1	0	0	0	0	2	0	
K 684	K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS	1	1	0	0	0	0	2	0	
K 685	K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS	87	88	63	100	93	100	78	50	
K 686	K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS	87	88	63	100	93	100	78	50	
K 687	K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS	87	89	63	100	96	99	80	50	
K 688	K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS	87	89	63	100	96	99	80	50	NUMBERING SYSTEMS
K 689	K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS	89	91	63	100	93	100	84	50	
K 690	K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS	88	90	63	100	96	100	80	50	
K 691	K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM	81	82	63	50	84	99	76	50	
K 692	K3-08 DO YOU SUBTRACT BINARY NUMBERS USING THE END-AROUND-CARRY METHOD	69	69	63	50	71	75	64	50	
K 693	K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD	75	76	63	50	78	81	71	50	
K 694	K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM	80	81	63	50	87	99	71	50	
L 695	L1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS	79	79	75	100	76	81	82	100	
L 696	L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	50	49	75	100	42	75	42	100	
L 697	L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	51	50	75	100	44	75	42	100	LOGIC FUNCTIONS
L 698	L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	47	46	63	50	40	69	42	100	
L 699	L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES	48	47	63	100	40	69	42	100	
L 700	L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	62	61	75	100	51	99	58	100	
L 701	L1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	63	62	75	100	53	99	58	100	
L 702	L1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	57	57	63	50	49	88	53	100	
L 703	L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS	58	58	63	100	47	81	58	100	
L 704	L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES	77	77	75	100	76	88	76	100	
L 705	L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES	79	79	75	100	78	99	76	100	
L 706	L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES	78	78	75	100	78	88	76	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
L 707	L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES	74	75	63	100	71	81	76	100	
L 708	L2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS, OR LOGIC CIRCUITS	61	59	75	50	47	44	80	100	
L 709	L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS	29	23	38	0	22	50	13	50	
L 710	L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	25	24	38	50	24	44	13	100	BOOLEAN EQUATIONS
L 711	L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS	39	40	38	0	44	56	29	0	
L 712	L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES	70	69	75	100	71	56	71	100	
L 713	L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS	51	50	75	0	51	50	44	100	
L 714	L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA	46	44	75	50	44	50	38	100	
L 715	L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES	41	40	63	50	33	56	40	100	
L 716	L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	29	28	38	50	27	38	24	50	
L 717	L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE	66	65	75	100	67	63	64	100	
L 718	L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS	49	49	50	50	44	63	47	50	
L 719	L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS	56	56	63	50	56	63	53	100	
L 720	L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS	61	60	63	50	53	56	69	100	
L 721	L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS	66	65	75	100	58	56	73	100	
L 722	L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS	64	63	75	100	53	63	71	100	
L 723	L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS	66	66	63	100	64	56	69	100	
L 724	L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS	61	61	63	100	56	63	64	100	
L 725	L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS	73	73	75	100	73	69	73	100	
L 726	L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES	56	55	75	0	49	69	58	100	
L 727	L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS	65	65	63	50	64	63	67	100	
L 728	L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS	63	63	63	0	64	63	64	100	
L 729	L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS	66	65	75	50	69	63	62	100	
L 730	L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS	63	63	63	50	69	63	62	100	
L 731	L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS	60	59	63	0	60	63	60	100	
L 732	L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS	91	91	50	0	33	63	90	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
L 733	L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB	80	81	63	100	78	81	84	100	COUNTERS
L 734	L3-02 DO YOU USE OR REFER TO UP-COUNTERS	75	75	75	100	73	81	73	100	
L 735	L3-03 DO YOU USE OR REFER TO DOWN-COUNTERS	75	75	75	100	73	81	73	100	
L 736	L3-04 DO YOU USE OR REFER TO SERIAL COUNTERS	67	67	75	100	69	56	67	100	
L 737	L3-05 DO YOU USE OR REFER TO PARALLEL COUNTERS	66	66	75	100	62	56	71	100	
L 738	L3-06 DO YOU USE OR REFER TO RING COUNTERS	92	91	50	50	90	38	94	50	
L 739	L3-07 DO YOU USE OR REFER TO DECADE COUNTERS	57	57	63	100	51	69	58	100	
L 740	L3-08 DO YOU USE OR REFER TO COUNT DETECT CIRCUITS	50	50	50	50	51	56	49	50	
L 741	L3-09 DO YOU USE OR REFER TO DOWN CLOCKS	75	75	75	100	73	81	73	100	
L 742	L3-10 DO YOU USE OR REFER TO UP CLOCKS	75	75	75	100	73	81	73	100	
L 743	L3-11 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	65	69	75	50	64	69	62	100	
L 744	L3-12 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING FLIP-FLOPS	62	61	75	50	64	56	60	100	
L 745	L3-13 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTERS	55	56	50	100	47	75	58	50	
L 746	L3-14 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTERS	90	90	50	50	36	38	94	50	
L 747	L3-15 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE REGISTER	56	55	75	100	53	44	58	100	
L 748	L3-16 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	71	70	75	100	73	75	64	100	
L 749	L3-17 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTERS	57	57	63	100	56	56	56	100	
L 750	L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	53	51	75	0	56	63	94	100	
L 751	L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING FLIP-FLOPS	51	50	75	0	56	56	92	100	
L 752	L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE REGISTERS	52	50	75	50	53	63	92	100	
L 753	L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR OTHER TYPES OF COUNTERS	49	48	63	50	53	50	90	100	
L 754	L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS	27	26	38	50	24	50	20	0	
L 755	L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN RING COUNTERS FOR SPECIFIC INPUT PULSES	34	32	50	0	29	38	36	50	
L 756	L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN COUNT DETECT CIRCUITS TO INDICATE A REQUIRED COUNT	40	38	75	0	36	56	33	100	
M 757	M1-01 DO YOU WORK WITH SAWTOOTH WAVE GENERATORS	60	59	75	100	56	56	62	100	
M 758	M1-02 DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS	32	32	25	0	27	38	38	50	
M 759	M1-03 DO YOU WORK WITH PULSED OSCILLATORS WITH REGENERATIVE FEEDBACK	44	42	63	50	38	25	53	100	TIMING CIRCUITS
M 760	M1-04 DO YOU WORK WITH PULSED OSCILLATORS WITHOUT REGENERATIVE FEEDBACK	42	41	63	50	38	25	49	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
M 761	M1-05 DO YOU WORK WITH BLOCKING OSCILLATORS	37	36	50	50	40	25	36	50	
M 762	M1-06 DO YOU USE OR REFER TO RISE TIME	50	49	75	50	51	50	44	100	
M 763	M1-07 DO YOU USE OR REFER TO FALL OR FLYBACK TIME	49	41	75	50	42	44	38	100	
M 764	M1-08 DO YOU USE OR REFER TO SWEEP TIME	57	57	63	100	58	69	49	50	
M 765	M1-09 DO YOU USE OR REFER TO ELECTRICAL LENGTH OF SAWTOOTH WAVEFORMS	50	50	50	100	47	44	56	50	
M 766	M1-10 DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH WAVEFORMS	47	47	50	100	47	38	49	50	
M 767	M1-11 DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH WAVEFORMS	49	42	63	50	36	38	51	50	
M 768	M1-12 DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH WAVEFORMS	45	44	63	50	36	38	56	50	
M 769	M2-01 DO YOU USE SIGNAL GENERATORS IN YOUR PRESENT JOB	45	44	50	50	38	44	48	50	
M 770	M2-02 DO YOU PERFORM OPERATIONAL CHECKS WHILE USING SIGNAL GENERATORS	35	34	50	50	29	38	36	50	
M 771	M2-03 DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS ADJUSTING, ALIGNING, OR CALIBRATING WHILE USING SIGNAL GENERATORS	33	32	38	50	29	31	33	0	USE OF SIGNAL GENERATORS
M 772	M2-04 DO YOU TROUBLESHOOT TO AN ASSEMBLY OR SUBASSEMBLY WHILE USING SIGNAL GENERATORS	35	35	38	50	29	44	36	0	
M 773	M2-05 DO YOU TROUBLESHOOT TO THE SMALLEST REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS	27	27	25	50	27	31	24	0	
M 774	M2-06 DO YOU USE AUDIO SINE-WAVE GENERATORS	32	31	50	0	29	25	33	50	
M 775	M2-07 DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS SUCH AS SQUARE WAVE, TRIANGLE, PULSE, OR SPIKE	24	23	38	0	20	25	27	50	
M 776	M2-08 DO YOU USE RF GENERATORS LESS THAN 1,000 MH	12	12	13	0	7	13	18	0	
M 777	M2-09 DO YOU USE RF GENERATORS GREATER THAN 1,000 MH	9	10	0	0	7	6	16	0	
M 778	M2-10 DO YOU USE OTHER SPECIAL PURPOSE OR MULTI-FUNCTION GENERATORS	23	23	25	50	18	31	22	50	
M 779	M3-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR GENERATORS	71	71	75	50	76	63	71	50	
M 780	M3-02 DO YOU INSPECT MOTORS	67	66	88	50	69	63	64	100	
M 781	M3-03 DO YOU CLEAN OR LUBRICATE MOTORS	65	64	75	50	62	63	67	50	
M 782	M3-04 DO YOU OPERATE MOTORS	63	61	88	50	67	63	56	100	MOTORS AND GENERATORS
M 783	M3-05 DO YOU REMOVE OR REPLACE COMPLETE MOTORS	68	68	75	50	76	63	62	50	
M 784	M3-06 DO YOU REMOVE OR REPLACE MOTOR PARTS	39	40	38	0	38	50	38	50	
M 785	M3-07 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF MOTORS	67	67	75	50	76	63	62	50	
M 786	M3-08 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF MOTORS	32	32	38	0	33	31	33	50	
M 787	M3-09 DO YOU PERFORM ANY TASKS ON FIELD COILS	18	17	25	0	20	19	13	50	
M 788	M3-10 DO YOU PERFORM ANY TASKS ON ARMATURES	24	25	13	0	24	25	27	50	
M 789	M3-11 DO YOU PERFORM ANY TASKS ON ROTORS	26	27	13	0	29	25	27	50	
M 790	M3-12 DO YOU PERFORM ANY TASKS ON BRUSHES	34	33	50	0	33	31	36	50	
M 791	M3-13 DO YOU PERFORM ANY TASKS ON SLIP RINGS	27	26	38	0	29	25	24	50	
M 792	M3-14 DO YOU PERFORM ANY TASKS ON COMMUTATORS	24	23	50	0	27	25	18	50	
M 793	M3-15 DO YOU PERFORM ANY TASKS ON POLE PIECES	19	19	25	0	22	25	13	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
M 794	M3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR	9	10	0	0	7	13	13	0	
M 795	M3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR	14	14	13	50	9	6	22	0	
M 796	M3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN MOTORS	10	11	0	0	7	13	16	0	
M 797	M3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS	50	49	63	50	51	44	47	50	
M 798	M3-20 DO YOU WORK WITH INDUCTION MOTORS	44	42	63	50	47	25	42	50	
M 799	M3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS	30	30	38	0	31	19	31	50	
M 800	M3-22 DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS	47	46	63	50	47	44	44	50	
M 801	M3-23 DO YOU INSPECT GENERATORS	55	53	75	50	47	56	58	50	
M 802	M3-24 DO YOU CLEAN OR LUBRICATE GENERATORS	50	50	63	50	40	50	58	50	
M 803	M3-25 DO YOU OPERATE GENERATORS	52	50	75	50	51	50	49	50	
M 804	M3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS	52	51	63	50	56	56	44	50	
M 805	M3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS	31	30	50	0	22	25	40	50	
M 806	M3-28 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF GENERATORS	59	57	88	50	53	50	62	50	
M 807	M3-29 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF GENERATORS	27	26	38	0	20	25	33	50	
N 808	N1-01 DO YOU WORK WITH METERS IN YOUR PRESENT JOB	83	83	88	100	78	81	87	50	
N 809	N1-02 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF PERMANENT MAGNETS	22	23	13	50	20	13	27	0	
N 810	N1-03 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF MOVING COILS	24	24	13	50	20	19	29	0	METER MOVEMENTS
N 811	N1-04 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF SPIRAL SPRINGS	21	22	13	50	18	13	27	0	
N 812	N1-05 DO YOU READ METER SCALES	86	86	88	100	84	81	87	50	
N 813	N1-06 DO YOU EXTEND THE RANGE OF AMMETERS	34	34	25	50	40	19	33	50	
N 814	N1-07 DO YOU ZERO OHMMETERS	85	85	88	100	84	81	84	50	
N 815	N1-08 DO YOU ZERO AMMETERS	39	38	50	0	42	31	38	50	
N 816	N1-09 DO YOU EXTEND THE RANGE OF VOLTMETERS	50	50	38	100	49	44	53	50	
N 817	N1-10 DO YOU USE OR REFER TO VOLTMETER SENSITIVITY (EXPRESSED IN UNITS OF OHMS PER VOLT)	67	67	75	100	71	56	64	50	
N 818	N2-01 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB	21	19	50	0	20	13	22	50	
N 819	N2-02 DO YOU INSPECT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	13	11	50	0	16	6	9	50	
N 820	N2-03 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	12	10	38	0	13	6	9	50	SATURABLE REACTORS AND MAGNETIC AMPLIFIERS
N 821	N2-04 DO YOU ADJUST MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	13	12	38	0	18	6	9	50	
N 822	N2-05 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	17	14	50	0	20	6	13	50	
N 823	N2-06 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	17	14	50	0	20	6	13	50	
N 824	N2-07 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIER OR SATURABLE REACTOR COMPONENTS	11	10	25	0	16	0	9	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
N 825	N2-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS	8	7	13	0	11	6	4	0	
N 826	N2-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF SINGLE WINDING SATURABLE REACTORS	5	5	0	0	7	6	4	0	
N 827	N2-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF SINGLE WINDING SATURABLE REACTORS	8	7	25	0	11	6	4	50	
N 828	N2-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS	8	7	13	0	7	13	7	50	
N 829	N2-12 DO YOU USE OR REFER TO COERCIVE FORCE IN SATURABLE REACTORS	4	5	0	0	7	6	2	0	
N 830	N2-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN SATURABLE REACTORS	5	5	0	0	9	6	2	0	
N 831	N2-14 DO YOU USE OR REFER TO FLUX DENSITY IN SATURABLE REACTORS	4	5	0	0	7	6	2	0	
N 832	N2-15 DO YOU USE OR REFER TO POINT OF SATURATION IN SATURABLE REACTORS	5	5	0	0	9	6	2	0	
N 833	N2-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS	10	9	25	0	13	6	7	0	
N 834	N3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS IN YOUR PRESENT JOB	55	54	63	100	44	50	62	50	
N 835	N3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS	25	24	38	50	24	38	20	50	
N 836	N3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW)	45	45	50	100	38	44	49	50	
N 837	N3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	43	41	63	100	40	38	40	50	
N 838	N3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	44	42	63	100	36	38	47	50	
N 839	N3-06 DO YOU USE OR REFER TO DIFFERENTIATING CIRCUITS	39	38	50	100	24	38	47	50	WAVESHAPING CIRCUITS
N 840	N3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS	44	43	50	100	31	38	53	50	
N 841	N3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT	32	31	50	50	24	38	33	50	
N 842	N3-09 DO YOU DETERMINE WHETHER AN LR OR RC CIRCUIT IS DIFFERENTIATING OR INTEGRATING BASED ON THE TIME CONSTANT AND OUTPUT CONFIGURATION	15	14	38	0	9	19	18	50	
N 843	N3-10 DO YOU WORK WITH SQUARE WAVE GENERATORS	46	45	63	50	40	44	51	50	
N 844	N3-11 DO YOU WORK WITH RECTANGULAR WAVE GENERATORS	27	26	38	0	13	38	36	50	
O 845	01-01 DO YOU WORK ON SINGLE SIDEBAND SYSTEMS IN YOUR PRESENT JOB	3	3	0	0	0	0	7	0	
O 846	01-02 DO YOU INSPECT SSB TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	0	0	4	0	
O 847	01-03 DO YOU CLEAN SSB TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	0	0	4	0	
O 848	01-04 DO YOU ALIGN SSB TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	0	0	4	0	
O 849	01-05 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	0	0	4	0	SINGLE SIDEBAND SYSTEMS
O 850	01-06 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE COMPONENTS	2	2	0	0	0	0	4	0	
O 851	01-07 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE SYSTEMS	2	2	0	0	0	0	4	0	
O 852	01-08 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE COMPONENTS	2	2	0	0	0	0	4	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
0 853	01-09 DO YOU PERFORM TASKS ON SSB AUDIO AMPLIFIERS	3	4	0	0	2	0	7	0	
0 854	01-10 DO YOU PERFORM TASKS ON SSB BALANCED MODULATORS	2	2	0	0	0	0	4	0	
0 855	01-11 DO YOU PERFORM TASKS ON SSB CARRIER OSCILLATORS	2	2	0	0	0	0	4	0	
0 856	01-12 DO YOU PERFORM TASKS ON SSB LC FILTERS	3	3	0	0	0	0	7	0	
0 857	01-13 DO YOU PERFORM TASKS ON SSB CRYSTAL FILTERS	2	2	0	0	0	0	4	0	
0 858	01-14 DO YOU PERFORM TASKS ON SSB MECHANICAL FILTERS	2	2	0	0	0	0	4	0	
0 859	01-15 DO YOU PERFORM TASKS ON SSB OSCILLATORS	3	3	0	0	0	0	7	0	
0 860	01-16 DO YOU PERFORM TASKS ON SSB MIXERS	2	2	0	0	0	0	4	0	
0 861	01-17 DO YOU PERFORM TASKS ON SSB DRIVERS	2	2	0	0	0	0	4	0	
0 862	01-18 DO YOU PERFORM TASKS ON SSB POWER AMPLIFIERS	3	4	0	0	2	0	7	0	
0 863	01-19 DO YOU PERFORM TASKS ON SSB RF AMPLIFIERS	3	3	0	0	0	0	7	0	
0 864	01-20 DO YOU PERFORM TASKS ON SSB FREQUENCY CONVERTERS	3	3	0	0	0	0	7	0	
0 865	01-21 DO YOU PERFORM TASKS ON SSB IF AMPLIFIERS	3	3	0	0	0	0	7	0	
0 866	01-22 DO YOU PERFORM TASKS ON SSB DEMODULATORS	2	2	0	0	0	0	4	0	
0 867	01-23 DO YOU PERFORM TASKS ON SSB DON'T REMEMBER WHICH SSB SYSTEM STAGES	2	2	0	0	0	0	4	0	
0 868	01-24 DO YOU USE OR REFER TO SELECTIVE FADING	1	1	0	0	0	0	2	0	
0 869	01-25 DO YOU USE OR REFER TO PEAK POWER	1	1	0	0	0	0	2	0	
0 870	01-26 DO YOU USE OR REFER TO FREQUENCY STABILITY	1	1	0	0	0	0	2	0	
0 871	01-27 DO YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS	2	2	0	0	0	0	4	0	
0 872	01-28 DO YOU CALCULATE PEAK POWER OR EFFECTIVE POWER OF SSB TRANSMITTERS	1	1	0	0	0	0	2	0	
0 873	01-29 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB TRANSMITTER SCHEMATIC DIAGRAMS	1	1	0	0	0	0	2	0	
0 874	01-30 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS	1	1	0	0	0	0	2	0	
0 875	02-01 DO YOU WORK ON PULSE MODULATION SYSTEMS IN YOUR PRESENT JOB	6	6	0	0	4	6	9	0	
0 876	02-02 DO YOU INSPECT PULSE MODULATION SYSTEMS	5	5	0	0	4	6	7	0	
0 877	02-03 DO YOU CLEAN PULSE MODULATION SYSTEMS	5	5	0	0	4	6	7	0	
0 878	02-04 DO YOU ALIGN PULSE MODULATION SYSTEMS	5	5	0	0	4	6	7	0	
0 879	02-05 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS	4	5	0	0	4	6	4	0	PULSE MODULATION SYSTEMS
0 880	02-06 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS	4	5	0	0	4	6	4	0	
0 881	02-07 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS	4	5	0	0	4	6	4	0	
0 882	02-08 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS	4	5	0	0	4	6	4	0	
0 883	02-09 DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS	3	4	0	0	4	6	2	0	
0 884	02-10 DO YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS	3	4	0	0	4	6	2	0	
0 885	02-11 DO YOU WORK ON PULSE-POSITION MODULATION (PPM) SYSTEMS	3	4	0	0	4	6	2	0	
0 886	02-12 DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS	3	4	0	0	4	6	2	0	
0 887	02-13 DO YOU WORK ON LINE PULSING MODULATION SYSTEMS	3	4	0	0	4	6	2	0	
0 888	02-14 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF MODULATION SYSTEM	4	5	0	0	2	0	9	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083
0 889	02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES	5	5	0	0	4	6	7	0
0 890	02-16 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHOKES AND CHARGING DIODES	4	5	0	0	4	6	4	0
0 891	02-17 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS	3	4	0	0	4	6	2	0
0 892	02-18 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS	4	5	0	0	4	6	4	0
0 893	02-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONS	1	1	0	0	0	0	2	0
0 894	02-20 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS	3	4	0	0	4	6	2	0
0 895	02-21 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES	1	1	0	0	0	0	2	0
0 896	02-22 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS	3	4	0	0	0	6	7	0
0 897	02-23 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS	4	5	0	0	2	6	7	0
0 898	02-24 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS	4	5	0	0	2	6	7	0
0 899	02-25 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS	5	5	0	0	4	6	7	0
0 900	02-26 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS	5	5	0	0	4	6	7	0
0 901	02-27 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS	5	5	0	0	4	6	7	0
0 902	02-28 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DON'T REMEMBER WHICH PULSE MODULATION SYSTEM STAGES	3	3	0	0	2	0	4	0
0 903	02-29 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	6	6	0	0	4	6	9	0
0 904	02-30 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	6	6	0	0	4	6	9	0
0 905	02-31 DO YOU USE OR REFER TO PULSE WIDTH (PW)	6	6	0	0	4	6	9	0
0 906	02-32 DO YOU USE OR REFER TO PULSE SHAPE	6	6	0	0	4	6	9	0
0 907	02-33 DO YOU USE OR REFER TO PEAK POWER	6	6	0	0	4	6	9	0
0 908	02-34 DO YOU USE OR REFER TO AVERAGE POWER	5	5	0	0	4	6	7	0
0 909	02-35 DO YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	4	5	0	0	4	6	4	0
0 910	02-36 DO YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	6	6	0	0	4	6	9	0
0 911	02-37 DO YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS	5	5	0	0	4	6	7	0
0 912	02-38 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS	5	5	0	0	4	6	7	0
0 913	02-39 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS	4	5	0	0	4	0	7	0
0 914	03-01 DO YOU WORK WITH ANTENNAS IN YOUR PRESENT JOB	2	2	0	0	2	0	2	0
0 915	03-02 DO YOU INSPECT ANTENNAS	2	2	0	0	2	0	2	0

ANTENNAS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083
0 916	03-03 DO YOU CLEAN ANTENNAS	2	2	0	0	2	0	2	0
0 917	03-04 DO YOU PHYSICALLY ALIGN ANTENNAS	1	1	0	0	0	0	2	0
0 918	03-05 DO YOU ELECTRICALLY ALIGN ANTENNAS	1	1	0	0	0	0	2	0
0 919	03-06 DO YOU TROUBLESHOOT TO ANTENNAS	2	2	0	0	2	0	2	0
0 920	03-07 DO YOU TROUBLESHOOT TO ANTENNA COMPONENTS	1	1	0	0	0	0	2	0
0 921	03-08 DO YOU REMOVE OR INSTALL ANTENNAS	2	2	0	0	2	0	2	0
0 922	03-09 DO YOU REMOVE OR REPLACE COMPONENTS OF ANTENNAS	1	1	0	0	0	0	2	0
0 923	03-10 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF E OR ELECTRIC FIELD LINES	1	1	0	0	0	0	2	0
0 924	03-11 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF H OR MAGNETIC FIELD LINES	1	1	0	0	0	0	2	0
0 925	03-12 DO YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR ANTENNAS	1	1	0	0	0	0	2	0
0 926	03-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS INDUCTIVE LOADS TO THE GENERATOR	1	1	0	0	0	0	2	0
0 927	03-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS INDUCTIVE LOADS TO THE GENERATOR	1	1	0	0	0	0	2	0
0 928	03-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS CAPACITIVE LOADS TO THE GENERATOR	1	1	0	0	0	0	2	0
0 929	03-16 DO YOU WORK WITH HERTZ ANTENNAS	1	1	0	0	0	0	2	0
0 930	03-17 DO YOU WORK WITH MARCONI ANTENNAS	1	1	0	0	0	0	2	0
0 931	03-18 DO YOU WORK WITH BROADSIDE ARRAYS	1	1	0	0	0	0	2	0
0 932	03-19 DO YOU WORK WITH END-FIRE ARRAYS	1	1	0	0	0	0	2	0
0 933	03-20 DO YOU WORK WITH CARDIOID ARRAYS	1	1	0	0	0	0	2	0
0 934	03-21 DO YOU WORK WITH COLLINEAR ARRAYS	1	1	0	0	0	0	2	0
0 935	03-22 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH ANTENNAS	1	1	0	0	0	0	2	0
0 936	03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF ANTENNAS	1	1	0	0	0	0	2	0
0 937	03-24 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC RADIATION FIELDS WHEN WORKING WITH ANTENNAS	1	1	0	0	0	0	2	0
0 938	03-25 DO YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF ANTENNAS	1	1	0	0	0	0	2	0
0 939	03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA RADIATION	1	1	0	0	0	0	2	0
0 940	03-27 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA INDUCTION FIELD	1	1	0	0	0	0	2	0
0 941	03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY POLARIZED	1	1	0	0	0	0	2	0
0 942	03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY POLARIZED	1	1	0	0	0	0	2	0
0 943	03-30 DO YOU MEASURE OR DETERMINE THE POLARITY OF ANTENNAS YOU WORK ON	1	1	0	0	0	0	2	0
0 944	03-31 DO YOU CONSTRUCT, OR MAKE THE CALCULATIONS NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR SPECIFIC WAVELENGTHS	1	1	0	0	0	0	2	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

		BY-TSK	SPC 074	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
O	945	03-32 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS	1	1	0	0	0	0	2	0	
O	946	03-33 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS DIRECTORS	1	1	0	0	0	0	2	0	
O	947	03-34 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS REFLECTORS	1	1	0	0	0	0	2	0	
O	948	03-35 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN DON'T REMEMBER WHAT KIND OF ELEMENTS	0	0	0	0	0	0	0	0	
O	949	03-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS	1	1	0	0	0	0	2	0	
O	950	03-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS	2	2	0	0	2	0	2	0	
O	951	03-38 DO YOU WORK ON DON'T REMEMBER THE DIRECTIONALITY	1	1	0	0	0	0	2	0	
O	952	03-39 DO YOU WORK WITH ROTAR ANTENNA ARRAYS	1	1	0	0	0	0	2	0	
P	953	P1-01 IN YOUR PRESENT JOB DO YOU WORK WITH TRANSMISSION LINES (TRANSMISSION LINES ARE DEFINED TO INCLUDE LEADS BETWEEN RECEIVERS AND ANTENNAS, TELEPHONE LEADS, AS WELL AS HIGH VOLTAGE POWER LINES, ETC. DO NOT CONSIDER WAVEGUIDES AS TRANSMISSION LINES	5	5	0	0	2	0	11	0	
P	954	P1-02 DO YOU REFER TO OR USE COPPER LOSS OR I2R LOSS IN TRANSMISSION LINES	1	1	0	0	0	0	2	0	
P	955	P1-03 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES	1	1	0	0	0	0	2	0	TRANSMISSION LINES
P	956	P1-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES	1	1	0	0	0	0	2	0	
P	957	P1-05 DO YOU USE OR REFER TO DIELECTRIC LOSS IN TRANSMISSION LINES	2	2	0	0	0	0	4	0	
P	958	P1-06 DO YOU USE OR REFER TO LEAKAGE LOSSES IN TRANSMISSION LINES	1	1	0	0	0	0	2	0	
P	959	P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES	3	4	0	0	0	0	9	0	
P	960	P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES	3	3	0	0	0	0	7	0	
P	961	P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES	3	3	0	0	0	0	7	0	
P	962	P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE TRANSMISSION LINES	6	6	0	0	2	0	13	0	
P	963	P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE TRANSMISSION LINES	1	1	0	0	0	0	2	0	
P	964	P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES	5	5	0	0	2	0	11	0	
P	965	P1-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION (OPEN, SHORTED, CAPACITIVE, INDUCTIVE)	3	3	0	0	0	0	7	0	
P	966	P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINES TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS	2	2	0	0	0	0	4	0	
P	967	P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS	3	4	0	0	0	0	9	0	
P	968	P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SR) OF TRANSMISSION LINES	1	1	0	0	0	0	2	0	
P	969	P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES	1	1	0	0	0	0	2	0	
P	970	P1-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER - WAVELENGTH MATCHING TRANSFORMERS TO MATCH TRANSMISSION LINES TO LOADS	1	1	0	0	0	0	2	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DI-ISA	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
P 971	P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING MATCHING TRANSFORMERS	3	3	0	0	0	0	7	0	
P 972	P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING DELTA MATCHING	2	2	0	0	0	0	4	0	
P 973	P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR PARTICULAR JOBS WITHOUT REFERRING TO TECHNICAL DATA	1	1	0	0	0	0	2	0	
P 974	P1-22 DO YOU USE OR REFER TO THE TERM CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES	3	4	0	0	2	0	7	0	
P 975	P1-23 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (ZO) OF TRANSMISSION LINES	1	1	0	0	0	0	2	0	
P 976	P1-24 DO YOU USE OR REFER TO THE TERM CUTOFF FREQUENCY OF TRANSMISSION LINES	1	1	0	0	0	0	2	0	
P 977	P1-25 DO YOU USE OR REFER TO THE TERM VELOCITY FACTOR (K) OF TRANSMISSION LINES	1	1	0	0	0	0	2	0	
P 978	P1-26 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION LINES FOR PARTICULAR FREQUENCIES	1	1	0	0	0	0	2	0	
P 979	P1-27 DO YOU CONSTRUCT TRANSMISSION LINES OF PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES	2	2	0	0	0	0	4	0	
P 980	P1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT AS THE FREQUENCY INCREASES AND THE PHYSICAL LENGTH OF TRANSMISSION LINES REMAIN CONSTANT, THE ELECTRICAL LENGTH INCREASES	2	2	0	0	0	0	4	0	
P 981	P1-29 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION LINES	3	4	0	0	0	0	9	0	
P 982	P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES	3	3	0	0	0	0	7	0	
P 983	P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING STUB MATCHING	3	3	0	0	0	0	7	0	
P 984	P2-01 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS IN YOUR PRESENT JOB	1	1	0	0	0	0	2	0	
P 985	P2-02 DO YOU INSPECT WAVEGUIDES OR CAVITY RESONATORS	1	1	0	0	0	0	2	0	
P 986	P2-03 DO YOU CLEAN WAVEGUIDES OR CAVITY RESONATORS	1	1	0	0	0	0	2	0	
P 987	P2-04 DO YOU BEND WAVEGUIDES OR CAVITY RESONATORS	1	1	0	0	0	0	2	0	WAVEGUIDES AND CAVITY RESONATORS
P 988	P2-05 DO YOU TWIST WAVEGUIDES OR CAVITY RESONATORS	1	1	0	0	0	0	2	0	
P 989	P2-06 DO YOU PRESSURIZE WAVEGUIDES OR CAVITY RESONATORS	1	1	0	0	0	0	2	0	
P 990	P2-07 DO YOU PURGE WAVEGUIDES OR CAVITY RESONATORS	1	1	0	0	0	0	2	0	
P 991	P2-08 DO YOU TROUBLESHOOT WAVEGUIDES OR CAVITY RESONATORS	1	1	0	0	0	0	2	0	
P 992	P2-09 DO YOU REMOVE OR INSTALL COMPLETE WAVEGUIDES	1	1	0	0	0	0	2	0	
P 993	P2-10 DO YOU REMOVE OR INSTALL WAVEGUIDE SECTIONS	1	1	0	0	0	0	2	0	
P 994	P2-11 DO YOU REMOVE OR INSTALL DUMMY LOADS	1	1	0	0	0	0	2	0	
P 995	P2-12 DO YOU REMOVE OR INSTALL E BENDS	1	1	0	0	0	0	2	0	
P 996	P2-13 DO YOU REMOVE OR INSTALL H BENDS	1	1	0	0	0	0	2	0	
P 997	P2-14 DO YOU REMOVE OR INSTALL OTHER BENDS	1	1	0	0	0	0	2	0	
P 998	P2-15 DO YOU REMOVE OR INSTALL CHOKE JOINTS	1	1	0	0	0	0	2	0	
P 999	P2-16 DO YOU REMOVE OR INSTALL ROTATING JOINTS	1	1	0	0	0	0	2	0	
P1000	P2-17 DO YOU REMOVE OR INSTALL DIRECTIONAL COUPLERS	1	1	0	0	0	0	2	0	
P1001	P2-18 DO YOU REMOVE OR INSTALL BIDIRECTIONAL COUPLERS	1	1	0	0	0	0	2	0	
P1002	P2-19 DO YOU USE OR REFER TO "A" WALL OF WAVEGUIDES	1	1	0	0	0	0	2	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DI-TSK	SPC 076	SPC 077	SPC 078	SPC 07Y	SPC 080	SPC 081	SPC 082	SPC 083
P1003	P2-20 DO YOU USE OR REFER TO "B" WALL OF WAVEGUIDES	1	1	0	0	0	0	2	0
P1004	P2-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF WAVEGUIDES	1	1	0	0	0	0	2	0
P1005	P2-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL OF WAVEGUIDES	1	1	0	0	0	0	2	0
P1006	P2-23 DO YOU USE OR REFER TO POWER-DETERMINING WALL OF WAVEGUIDES	1	1	0	0	0	0	2	0
P1007	P2-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY CONDITIONS	1	1	0	0	0	0	2	0
P1008	P2-25 DO YOU USE OR REFER TO MAGNETIC FIELD BOUNDARY CONDITIONS	1	1	0	0	0	0	2	0
P1009	P2-26 DO YOU USE OR REFER TO DUPLEXER FIELD BOUNDARY CONDITIONS	1	1	0	0	0	0	2	0
P1010	P2-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST WAVEGUIDES ARE MADE WITH A "B" WALL SIZE OF .7 WAVELENGTHS OF THE OPERATING FREQUENCY	1	1	0	0	0	0	2	0
P1011	P2-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST "A" WALLS RANGE FROM .2 TO .5 WAVELENGTHS IN SIZE, WITH .35 USED AS AN AVERAGE	1	1	0	0	0	0	2	0
P1012	P2-29 ARE YOU CONCERNED WITH THE MATERIAL (SUCH AS BRASS) WHICH WAVEGUIDES ARE MADE OF	1	1	0	0	0	0	2	0
P1013	P2-30 DO YOU COMPUTE THE LENGTH OF A WAVEGUIDE FOR SPECIFIC INSTALLATION	1	1	0	0	0	0	2	0
P1014	P2-31 DO YOU USE THE RIGHT HAND RULE TO DETERMINE THE DIRECTION OF PROPAGATION, DIRECTION OF "E" FIELD, OR DIRECTION OF "H" FIELD IN WAVEGUIDES	1	1	0	0	0	0	2	0
P1015	P2-32 DO YOU USE OR REFER TO THE TIME PHASE OF PEAK "E" OR "H" LINES IN WAVEGUIDES	1	1	0	0	0	0	2	0
P1016	P2-33 DO YOU MEASURE THE TIME PHASE OF "E" OR "H" LINES IN WAVEGUIDES	0	0	0	0	0	0	0	0
P1017	P2-34 DO YOU USE OR REFER TO THE SPACE QUADRATURE OF "E" OR "H" LINES IN WAVEGUIDES	1	1	0	0	0	0	2	0
P1018	P2-35 ARE HIGH POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	1	1	0	0	0	0	2	0
P1019	P2-36 ARE LOW POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0
P1020	P2-37 ARE LOOPS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0
P1021	P2-38 ARE APERTURES (WINDOWS OR IRISES) USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0
P1022	P2-39 ARE DON'T REMEMBER THE KIND OF ENERGY COUPLING USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	0	0	0	0
P1023	P2-90 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO TECHNICAL DATA	1	1	0	0	0	0	2	0
P1024	P2-91 DO YOU DETERMINE THE POSITIONING OF LOOPS IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO TECHNICAL DATA	1	1	0	0	0	0	2	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	QT-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
P1025	P2-42 DO YOU DETERMINE THE POSITIONING OR SIZE OF APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO TECHNICAL DATA	0	0	0	0	0	0	0	0	
P1026	P2-43 ARE CHOKE JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	1	1	0	0	0	0	2	0	
P1027	P2-44 ARE ROTATING JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	1	1	0	0	0	0	2	0	
P1028	P2-45 ARE DON'T REMEMBER THE KIND OF JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	1	1	0	0	0	0	2	0	
P1029	P2-46 DO YOU TUNE CAVITY RESONATORS USING CAPACITIVE TUNING	1	1	0	0	0	0	2	0	
P1030	P2-47 DO YOU TUNE CAVITY RESONATORS USING INDUCTIVE TUNING	0	0	0	0	0	0	0	0	
P1031	P2-48 DO YOU TUNE CAVITY RESONATORS USING VOLUME TUNING	0	0	0	0	0	0	0	0	
P1032	P2-49 DO YOU TUNE CAVITY RESONATORS USING DON'T REMEMBER THE METHOD OF TUNING	1	1	0	0	0	0	2	0	
P1033	P2-50 DO YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY RESONATORS	1	1	0	0	0	0	2	0	
P1034	P3-01 IN YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS, TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR MAGNETRONS	1	1	0	0	0	0	2	0	
P1035	P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE	1	1	0	0	0	0	2	0	
P1036	P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME	1	1	0	0	0	0	2	0	MICROWAVE AMPLIFIERS AND
P1037	P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE	1	1	0	0	0	0	2	0	OSCILLATORS
P1038	P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL CIRCUITRY	1	1	0	0	0	0	2	0	
P1039	P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTRON VELOCITY MODULATION	1	1	0	0	0	0	2	0	
P1040	P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING	1	1	0	0	0	0	2	0	
P1041	P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS	0	0	0	0	0	0	0	0	
P1042	P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS	0	0	0	0	0	0	0	0	
P1043	P3-10 DO YOU WORK WITH REFLEX KLYSTRONS	1	1	0	0	0	0	2	0	
P1044	P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT)	1	1	0	0	0	0	2	0	
P1045	P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC AMPLIFIERS	0	0	0	0	0	0	0	0	
P1046	P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC AMPLIFIERS	1	1	0	0	0	0	2	0	
P1047	P3-14 DO YOU WORK WITH MAGNETRONS	1	1	0	0	0	0	2	0	
P1048	P3-15 DO YOU INSPECT KLYSTRONS OR TWT	1	1	0	0	0	0	2	0	
P1049	P3-16 DO YOU CLEAN KLYSTRONS OR TWT	1	1	0	0	0	0	2	0	
P1050	P3-17 DO YOU TUNE KLYSTRONS OR TWT ELECTRICALLY	1	1	0	0	0	0	2	0	
P1051	P3-18 DO YOU TUNE KLYSTRONS OR TWT MECHANICALLY	1	1	0	0	0	0	2	0	
P1052	P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF KLYSTRONS OR TWT	1	1	0	0	0	0	2	0	
P1053	P3-20 DO YOU TROUBLESHOOT KLYSTRONS OR TWT	1	1	0	0	0	0	2	0	
P1054	P3-21 DO YOU REMOVE OR REPLACE COMPLETE KLYSTRON OR TWT	1	1	0	0	0	0	2	0	
P1055	P3-22 DO YOU REMOVE OR REPLACE KLYSTRON OR TWT COMPONENTS	1	1	0	0	0	0	2	0	
P1056	P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS	1	1	0	0	0	0	2	0	
P1057	P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS	1	1	0	0	0	0	2	0	
P1058	P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS	1	1	0	0	0	0	2	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DUTIES	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083
P1059	P3-26 DO YOU TUNE PARAMETRIC AMPLIFIERS	1	1	0	0	0	0	2	0
P1060	P3-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC AMPLIFIERS	1	1	0	0	0	0	2	0
P1061	P3-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS	1	1	0	0	0	0	2	0
P1062	P3-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC AMPLIFIER	1	1	0	0	0	0	2	0
P1063	P3-30 DO YOU REMOVE OR REPLACE PARAMETRIC AMPLIFIER COMPONENTS	1	1	0	0	0	0	2	0
P1064	P3-31 DO YOU INSPECT MAGNETRONS	1	1	0	0	0	0	2	0
P1065	P3-32 DO YOU CLEAN MAGNETRONS	1	1	0	0	0	0	2	0
P1066	P3-33 DO YOU ADJUST MAGNETRONS	1	1	0	0	0	0	2	0
P1067	P3-34 DO YOU TUNE MAGNETRONS	1	1	0	0	0	0	2	0
P1068	P3-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS	0	0	0	0	0	0	0	0
P1069	P3-36 DO YOU TROUBLESHOOT MAGNETRONS	1	1	0	0	0	0	2	0
P1070	P3-37 DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON	1	1	0	0	0	0	2	0
P1071	P3-38 DO YOU REMOVE OR REPLACE MAGNETRON COMPONENTS	1	1	0	0	0	0	2	0
P1072	P3-39 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS COLLECTOR PLATES	1	1	0	0	0	0	2	0
P1073	P3-40 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER CAVITIES	1	1	0	0	0	0	2	0
P1074	P3-41 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER GRIDS	1	1	0	0	0	0	2	0
P1075	P3-42 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS FEEDBACK LOOPS	1	1	0	0	0	0	2	0
P1076	P3-43 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS DRIFT SPACES	1	1	0	0	0	0	2	0
P1077	P3-44 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER GRIDS	2	2	0	0	2	0	2	0
P1078	P3-45 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER CAVITIES	1	1	0	0	0	0	2	0
P1079	P3-46 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GRIDS	1	1	0	0	0	0	2	0
P1080	P3-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES	1	1	0	0	0	0	2	0
P1081	P3-48 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REPELLER (REFLECTOR) PLATES	1	1	0	0	0	0	2	0
P1082	P3-49 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRIDS	1	1	0	0	0	0	2	0
P1083	P3-50 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GAPS	1	1	0	0	0	0	2	0
P1084	P3-51 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES	1	1	0	0	0	0	2	0
P1085	P3-52 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS	1	1	0	0	0	0	2	0
P1086	P3-53 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS	1	1	0	0	0	0	2	0
P1087	P3-54 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON CATHODES	1	1	0	0	0	0	2	0

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
P1088	P3-55 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS	1	1	0	0	0	0	2	0	
P1089	P3-56 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES FILAMENTS	1	1	0	0	0	0	2	0	
P1090	P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES CATHODES	1	1	0	0	0	0	2	0	
P1091	P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MODULATOR GRIDS	1	1	0	0	0	0	2	0	
P1092	P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ANODES	1	1	0	0	0	0	2	0	
P1093	P3-60 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES HELIXES	1	1	0	0	0	0	2	0	
P1094	P3-61 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES COLLECTORS	1	1	0	0	0	0	2	0	
P1095	P3-62 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MAGNETS	1	1	0	0	0	0	2	0	
P1096	P3-63 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ATTENUATORS	1	1	0	0	0	0	2	0	
P1097	P3-64 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE CIRCULATORS	1	1	0	0	0	0	2	0	
P1098	P3-65 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER SIGNAL CAVITIES	1	1	0	0	0	0	2	0	
P1099	P3-66 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER IDLER CAVITIES	1	1	0	0	0	0	2	0	
P1100	P3-67 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER VARACTOR DIODES	1	1	0	0	0	0	2	0	
P1101	P3-68 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE ISOLATORS	1	1	0	0	0	0	2	0	
P1102	P3-69 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER REVERSE-BIAS BATTERIES	1	1	0	0	0	0	2	0	
P1103	P3-70 DO YOU PERFORM TASKS ON ANODES	1	1	0	0	0	0	2	0	
P1104	P3-71 DO YOU PERFORM TASKS ON ANODE COOLING PINS	1	1	0	0	0	0	2	0	
P1105	P3-72 DO YOU PERFORM TASKS ON COUPLING LOOPS	1	1	0	0	0	0	2	0	
P1106	P3-73 DO YOU PERFORM TASKS ON HEATER LEADS	1	1	0	0	0	0	2	0	
P1107	P3-74 DO YOU PERFORM TASKS ON RESONANT CAVITIES	1	1	0	0	0	0	2	0	
P1108	P3-75 DO YOU PERFORM TASKS ON CATHODES	1	1	0	0	0	0	2	0	
P1109	P3-76 DO YOU PERFORM TASKS ON MAGNETS	1	1	0	0	0	0	2	0	
G1110	G1-01 DO YOU USE OR REFER TO STORAGE REGISTERS	81	81	75	100	82	81	80	100	
G1111	G1-02 DO YOU USE OR REFER TO SHIFT REGISTERS	79	79	75	100	84	75	76	100	
G1112	G1-03 DO YOU USE OR REFER TO LOGIC SYMBOLS OF SHIFT REGISTERS	77	78	63	100	80	81	76	100	REGISTERS
G1113	G1-04 DO YOU USE OR REFER TO LOGIC SYMBOLS OF STORAGE REGISTERS	76	77	63	100	76	88	76	100	
G1114	G1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	74	74	75	100	76	75	71	100	
G1115	G1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF REGISTERS	74	75	63	100	78	81	69	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
Q1116	Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES HAVE PASSED	58	59	50	0	67	63	53	50	
Q1117	Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB	82	84	63	100	84	94	76	50	
Q1118	Q2-02 DO YOU USE OR REFER TO DELAY LINES	68	68	63	100	64	69	71	100	
Q1119	Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES	80	80	75	50	80	94	78	100	
Q1120	Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS	54	52	75	100	33	50	69	100	STORAGE DEVICES
Q1121	Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES	74	74	75	100	76	69	71	100	
Q1122	Q2-06 DO YOU USE OR REFER TO ACCESS TIME OR SPEED OR MEMORY SYSTEMS	77	77	75	100	78	88	73	100	
Q1123	Q2-07 DO YOU USE OR REFER TO WORD CAPACITY OF MEMORY SYSTEMS	78	78	75	100	80	88	71	100	
Q1124	Q2-08 DO YOU USE OR REFER TO VOLATILITY OF MEMORY SYSTEMS	49	48	63	50	53	44	44	100	
Q1125	Q2-09 DO YOU USE OR REFER TO LOGIC SYMBOL OF DELAY LINES	66	67	63	100	62	75	67	100	
Q1126	Q3-01 IN YOUR PRESENT JOB, DO YOU WORK WITH DIGITAL-TO-ANALOG (D/A) CONVERTERS, ANALOG-TO-DIGITAL (A/D) CONVERTERS, OR BINARY-TO-DECIMAL READOUT CONVERTERS	89	90	75	100	91	94	89	100	
Q1127	Q3-02 DO YOU COMPUTE OUTPUT VOLTAGES FOR ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A) CONVERTERS FOR GIVEN INPUT VOLTAGES	55	54	75	0	67	50	44	100	
Q1128	Q3-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE COUNT IN ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A) CONVERTERS IS DETERMINED BY ADDING THE DENOMINATORS OF THE RESISTORS	30	30	38	0	31	19	33	50	DIGITAL TO ANALOG CONVERTERS
Q1129	Q3-04 DO YOU COMPUTE ANALOG VOLTAGES FOR GIVEN BINARY COUNTS IN ELECTRONIC DIGITAL-TO-ANALOG (D/A) CONVERTERS	55	54	75	0	60	56	44	100	
Q1130	Q3-05 DO YOU PERFORM SAMPLE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	52	51	63	100	64	44	40	50	
Q1131	Q3-06 DO YOU PERFORM HOLD FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	52	51	63	100	64	44	40	50	
Q1132	Q3-07 DO YOU PERFORM COMPARE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	45	44	63	100	47	44	38	50	
Q1133	Q3-08 DO YOU PERFORM DIGITIZE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	39	38	50	0	47	44	31	50	
Q1134	Q3-09 DO YOU PERFORM DON'T REMEMBER WHICH FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	34	36	13	50	33	25	42	50	
Q1135	Q3-10 DO YOU USE OR REFER TO SAMPLE FUNCTION OF A/D CONVERTERS	57	57	63	100	64	63	44	50	
Q1136	Q3-11 DO YOU USE OR REFER TO HOLD FUNCTION OF A/D CONVERTERS	59	59	63	100	71	63	47	50	
Q1137	Q3-12 DO YOU USE OR REFER TO COMPARE FUNCTION OF A/D CONVERTERS	56	55	63	100	60	63	49	50	
Q1138	Q3-13 DO YOU USE OR REFER TO DIGITAL FUNCTION OF A/D CONVERTERS	63	62	75	50	73	63	51	100	
Q1139	Q3-14 DO YOU PERFORM ANY TASKS ON MECHANICAL ANALOG-TO-DIGITAL (A/D) CONVERTERS	39	39	50	50	38	50	36	100	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
R1140	R1-01 DO YOU WORK WITH PHANTASTRON CIRCUITRY IN YOUR PRESENT JOB	2	2	0	0	0	6	2	0	PHANTASTRONS
R1141	R2-01 IN YOUR PRESENT JOB DO YOU WORK WITH SCHMITT TRIGGER CIRCUITS	21	20	38	0	7	50	24	50	
R1142	R2-02 DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS	18	17	38	0	4	44	22	50	SCHMITT TRIGGERS
R1143	R2-03 DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS	21	20	38	0	7	50	24	50	
R1144	R3-01 IN YOUR PRESENT JOB DO YOU FABRICATE MULTICONDUCTOR CABLES	37	35	63	0	31	31	48	100	
R1145	R3-02 DO YOU FABRICATE COAXIAL CABLES	39	37	75	0	27	38	44	100	CABLE FABRICATION
S1146	S1-01 IN YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS	77	80	63	100	71	69	93	100	
S1147	S1-02 DO YOU PERFORM ANY TASKS ON NIXIE LIGHTS OR NIXIE LIGHT DECODER SYSTEMS	42	41	63	50	40	38	42	50	INPUT/OUTPUT DEVICES
S1148	S1-03 DO YOU ANALYZE NIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA	29	27	63	0	22	25	31	50	
S1149	S2-01 DO YOU WORK WITH PHOTO TUBES IN YOUR PRESENT JOB	39	39	50	0	31	38	48	0	PHOTO SENSITIVE DEVICES
S1150	S3-01 IN YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS	40	38	75	0	31	19	31	50	
S1151	S3-02 DO YOU MEASURE EXCITATION FREQUENCIES	13	14	13	0	11	6	18	0	
S1152	S3-03 DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIPS	14	14	13	0	11	6	20	0	
S1153	S3-04 DO YOU USE OR REFER TO EXCITATION FREQUENCIES	13	13	13	0	11	6	16	0	
S1154	S3-05 DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIPS	13	14	13	0	9	6	20	0	
S1155	S3-06 DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	33	32	50	0	42	19	27	50	SYNCHRONOUS VIBRATIONS (CHOPPER CIRCUITS)
S1156	S3-07 DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	23	19	75	0	20	13	22	50	
S1157	S3-08 DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	29	21	63	0	27	13	20	50	
S1158	S3-09 DO YOU USE COMPARISON CIRCUITS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	29	21	75	0	22	13	24	50	
T1159	T1-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS	2	2	0	0	0	0	4	0	
T1160	T1-02 DO YOU INSPECT INFRARED SYSTEMS	2	2	0	0	0	0	4	0	
T1161	T1-03 DO YOU CLEAN INFRARED SYSTEMS	2	2	0	0	0	0	4	0	
T1162	T1-04 DO YOU ADJUST OR CALIBRATE INFRARED SYSTEMS	1	1	0	0	0	0	2	0	
T1163	T1-05 DO YOU OPERATE INFRARED SYSTEMS	2	2	0	0	0	0	4	0	
T1164	T1-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF INFRARED SYSTEMS	2	2	0	0	0	0	4	0	
T1165	T1-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF INFRARED SYSTEMS	1	1	0	0	0	0	2	0	INFRARED
T1166	T1-08 DO YOU TROUBLESHOOT DOWN TO INFRARED SYSTEM COMPONENT PARTS	0	0	0	0	0	0	0	0	
T1167	T1-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF INFRARED SYSTEMS	1	1	0	0	0	0	2	0	
T1168	T1-10 DO YOU REMOVE OR REPLACE INFRARED SYSTEM COMPONENT PARTS	1	1	0	0	0	0	2	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

BY-TSK		SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
T1169	T1-11 DO YOU USE OR REFER TO FAR REGION	1	1	0	0	0	0	2	0	
T1170	T1-12 DO YOU USE OR REFER TO INTERMEDIATE REGION	1	1	0	0	0	0	2	0	
T1171	T1-13 DO YOU USE OR REFER TO NEAR REGION	1	1	0	0	0	0	2	0	
T1172	T1-14 DO YOU USE OR REFER TO MICRON	1	1	0	0	0	0	2	0	
T1173	T1-15 DO YOU USE OR REFER TO GRAY BODIES	1	1	0	0	0	0	2	0	
T1174	T1-16 DO YOU USE OR REFER TO BLACK BODIES	1	1	0	0	0	0	2	0	
T1175	T1-17 DO YOU USE OR REFER TO ABSORPTION	1	1	0	0	0	0	2	0	
T1176	T1-18 DO YOU USE OR REFER TO SCATTERING	1	1	0	0	0	0	2	0	
T1177	T1-19 DO YOU USE OR REFER TO ABSOLUTE ZERO	1	1	0	0	0	0	2	0	
T1178	T1-20 DO YOU PERFORM TASKS ON BLITZ	1	1	0	0	0	0	2	0	
T1179	T1-21 DO YOU PERFORM TASKS ON TARGET BUTTONS	1	1	0	0	0	0	2	0	
T1180	T1-22 DO YOU PERFORM TASKS ON ERECTOR LENSES	1	1	0	0	0	0	2	0	
T1181	T1-23 DO YOU PERFORM TASKS ON OCULAR LENSES	1	1	0	0	0	0	2	0	
T1182	T1-24 DO YOU PERFORM TASKS ON CORRECTION LENSES	1	1	0	0	0	0	2	0	
T1183	T1-25 DO YOU PERFORM TASKS ON FILTERS	1	1	0	0	0	0	2	0	
T1184	T1-26 DO YOU PERFORM TASKS ON SPHERICAL MIRRORS	1	1	0	0	0	0	2	0	
T1185	T1-27 DO YOU PERFORM TASKS ON PLANE MIRRORS	1	1	0	0	0	0	2	0	
T1186	T2-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH LASERS	1	1	0	0	0	0	2	0	
T1187	T2-02 DO YOU INSPECT LASER SYSTEMS	1	1	0	0	0	0	2	0	
T1188	T2-03 DO YOU CLEAN LASER SYSTEMS	1	1	0	0	0	0	2	0	
T1189	T2-04 DO YOU OPERATE LASER SYSTEMS	1	1	0	0	0	0	2	0	
T1190	T2-05 DO YOU OPERATE LASER SYSTEMS	0	0	0	0	0	0	0	0	
T1191	T2-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF LASER SYSTEMS	1	1	0	0	0	0	2	0	LASERS
T1192	T2-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF LASER SYSTEMS	1	1	0	0	0	0	2	0	
T1193	T2-08 DO YOU TROUBLESHOOT TO COMPONENT PARTS OF LASER SYSTEMS	0	0	0	0	0	0	0	0	
T1194	T2-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF LASER SYSTEMS	1	1	0	0	0	0	2	0	
T1195	T2-10 DO YOU REMOVE OR REPLACE COMPONENT PARTS OF LASER SYSTEMS	0	0	0	0	0	0	0	0	
T1196	T2-11 DO YOU USE OR REFER TO ANGSTROMS (A).	1	1	0	0	0	0	2	0	
T1197	T2-12 DO YOU USE OR REFER TO ELECTRON ENERGY LEVELS	1	1	0	0	0	0	2	0	
T1198	T2-13 DO YOU USE OR REFER TO GROUND STATE	1	1	0	0	0	0	2	0	
T1199	T2-14 DO YOU USE OR REFER TO EXCITED STATE	0	0	0	0	0	0	0	0	
T1200	T2-15 DO YOU USE OR REFER TO PACKET OF RADIATION	0	0	0	0	0	0	0	0	
T1201	T2-16 DO YOU USE OR REFER TO PHOTONS	1	1	0	0	0	0	2	0	
T1202	T2-17 DO YOU USE OR REFER TO SPONTANEOUS EMISSION	1	1	0	0	0	0	2	0	
T1203	T2-18 DO YOU USE OR REFER TO STIMULATED EMISSION	1	1	0	0	0	0	2	0	
T1204	T2-19 DO YOU USE OR REFER TO COHERENCE OR INCOHERENCE	1	1	0	0	0	0	2	0	
T1205	T2-20 DO YOU USE OR REFER TO INVERSION LEVEL	1	1	0	0	0	0	2	0	
T1206	T2-21 DO YOU USE OR REFER TO MONOCHROMATIC	1	1	0	0	0	0	2	0	
T1207	T2-22 DO YOU WORK WITH ACTIVE MATERIALS	1	1	0	0	0	0	2	0	
T1208	T2-23 DO YOU WORK WITH PUMPING SOURCES	1	1	0	0	0	0	2	0	
T1209	T2-24 DO YOU WORK WITH FULL SILVERED (100% REFLECTIVE) MIRRORS	1	1	0	0	0	0	2	0	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
T1210	T2-25 DO YOU WORK WITH HALF SILVERED (92% REFLECTIVE) MIRRORS	1	1	0	0	0	0	2	0	
T1211	T2-26 DO YOU WORK WITH HELICAL FLASHTUBES	1	1	0	0	0	0	2	0	
T1212	T2-27 DO YOU WORK WITH RUBY	1	1	0	0	0	0	2	0	
T1213	T2-28 DO YOU WORK WITH HELIUM-NEON	1	1	0	0	0	0	2	0	
T1214	T2-29 DO YOU WORK WITH HELIUM-XENON	1	1	0	0	0	0	2	0	
T1215	T2-30 DO YOU WORK WITH XENON	1	1	0	0	0	0	2	0	
T1216	T2-31 DO YOU WORK WITH CESIUM-HELIUM	1	1	0	0	0	0	2	0	
T1217	T2-32 DO YOU WORK WITH ARGON	1	1	0	0	0	0	2	0	
T1218	T2-33 DO YOU WORK WITH NEODYMIUM IN GLASS	1	1	0	0	0	0	2	0	
T1219	T2-34 DO YOU WORK WITH GALLIUM ARSENIDE	1	1	0	0	0	0	2	0	
T1220	T3-01 IN YOUR PRESENT JOB DO YOU WORK WITH DISPLAY TUBES, SUCH AS DIRECT VIEW STORAGE (DVST) OR MULTIPLE MODE STORAGE TUBES (MMST)	26	23	63	0	7	38	38	50	
T1221	T3-02 DO YOU INSPECT DVST OR MMST	22	20	50	0	4	38	31	50	
T1222	T3-03 DO YOU CLEAN DVST OR MMST	18	16	50	0	4	31	24	50	
T1223	T3-04 DO YOU ADJUST OR CALIBRATE DVST OR MMST	19	16	63	0	4	31	24	50	
T1224	T3-05 DO YOU OPERATE SYSTEMS THAT CONTAIN DVST OR MMST	25	23	63	0	7	38	36	50	
T1225	T3-06 DO YOU TROUBLESHOOT DVST OR MMST CIRCUITS	21	18	63	0	4	38	27	50	DISPLAY TUBES
T1226	T3-07 DO YOU REMOVE OR REPLACE DVST OR MMST TUBES FROM MAJOR ASSEMBLIES OR UNITS	18	16	50	0	4	38	22	50	
T1227	T3-08 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF DVST	13	9	63	0	4	38	4	50	
T1228	T3-09 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF MM[illegible]	7	6	13	0	4	25	2	0	
T1229	T3-10 DO YOU PERFORM TASKS [illegible]LOOD GUNS	8	5	38	0	0	19	7	0	
T1230	T3-11 DO YOU PERFORM TASKS [illegible]RITE GUNS	11	8	50	0	0	19	13	0	
T1231	T3-12 DO YOU PERFORM TASKS ON ATTACK GUNS	7	5	25	0	0	19	7	0	
T1232	T3-13 DO YOU PERFORM TASKS ON ERASE GUNS	13	10	50	0	2	19	16	0	
T1233	T3-14 DO YOU PERFORM TASKS ON STORAGE GRIDS	9	6	50	0	2	25	4	0	
U1234	U1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING TASKS	83	84	75	100	84	94	80	100	
U1235	U1-02 DO YOU USE OR REFER TO DECIMAL SYSTEMS	75	75	75	50	78	81	71	100	
U1236	U1-03 DO YOU USE OR REFER TO PROGRAMS	81	81	75	100	84	88	76	100	
U1237	U1-04 DO YOU USE OR REFER TO HEXIDECIMAL SYSTEMS	53	54	38	100	53	69	47	100	
U1238	U1-05 DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS	98	97	63	50	97	69	90	100	
U1239	U1-06 DO YOU USE OR REFER TO FOUR SYSTEMS	18	17	25	0	16	31	16	100	
U1240	U1-07 DO YOU USE OR REFER TO BINARY SYSTEMS	81	81	75	100	82	94	76	100	PROGRAMMING
U1241	U1-08 DO YOU USE OR REFER TO TIME-SHARING	93	91	63	100	38	38	94	50	
U1242	U1-09 DO YOU USE OR REFER TO DATA WORDS	81	81	75	100	82	94	76	100	
U1243	U1-10 DO YOU USE OR REFER TO ADDRESS WORDS	82	82	75	100	84	94	76	100	
U1244	U1-11 DO YOU USE OR REFER TO ADDRESS/SUBADDRESS	68	68	63	50	67	69	71	100	
U1245	U1-12 DO YOU USE OR REFER TO STEERING/INFORMATION	37	36	50	50	33	44	33	50	
U1246	U1-13 DO YOU USE OR REFER TO INFORMATION WORDS	63	64	50	0	67	69	62	50	
U1247	U1-14 DO YOU PERFORM TASKS ON SINGLE LEVEL PROGRAMMING	57	56	75	50	51	63	58	100	
U1248	U1-15 DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING	39	40	38	50	38	44	40	50	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	BY-TSK	SPC 076	SPC 077	SPC 078	SPC 079	SPC 080	SPC 081	SPC 082	SPC 083	
U1249	U1-16 DO YOU PERFORM TASKS ON INPUT DEVICES	79	79	75	100	82	81	76	100	
U1250	U1-17 DO YOU PERFORM TASKS ON STORAGE DEVICES	74	74	75	100	71	81	73	100	
U1251	U1-18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS	70	69	75	100	64	75	71	100	
U1252	U1-19 DO YOU PERFORM TASKS ON CONTROL SECTIONS	71	70	75	100	67	81	69	100	
U1253	U1-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES	79	79	75	100	82	81	76	100	
U1254	U1-21 DO YOU PERFORM TASKS ON POWER SUPPLIES	79	79	75	100	80	100	71	100	
U1255	U2-01 DO YOU USE DECIBELS TO EXPRESS AMPLIFICATION AND ATTENUATION	6	5	25	0	2	13	4	0	
U1256	U2-02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS	3	2	13	0	0	0	4	0	DB AND POWER RATIOS
U1257	U2-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS	2	1	13	0	0	0	2	0	
U1258	U2-04 DUMMY TASK TO IDENTIFY INCUMBENTS WHO PERFORMED NO TASKS	1	1	0	0	2	0	0	0	

AD-A047 543 AIR FORCE OCCUPATIONAL MEASUREMENT CENTER LACKLAND A--ETC F/G 5/9
DIGITAL FLIGHT SIMULATOR SPECIALIST AFSC 34154.(U)
AUG 77 T J O'CONNOR, C J KOPALA

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This report summarizes the results of the administration of the Electronic Principles Inventory to airmen assigned as Digital Flight Simulator Specialist (AFSC 34154). The report gives a detailed listing of the technical tasks and knowledge needed to perform the jobs within the specialty or career ladder.

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This specialty has the following functions:

Installs, maintains, repairs, inspects, modifies and operates digital flight simulators, motion systems, computer software systems, and associated electronic equipment. Performs preventive maintenance on digital flight simulators. Installs, repairs, adjusts, and modifies digital flight simulators. Operates digital flight simulators and simulator equipment. Supervises digital flight simulator personnel.